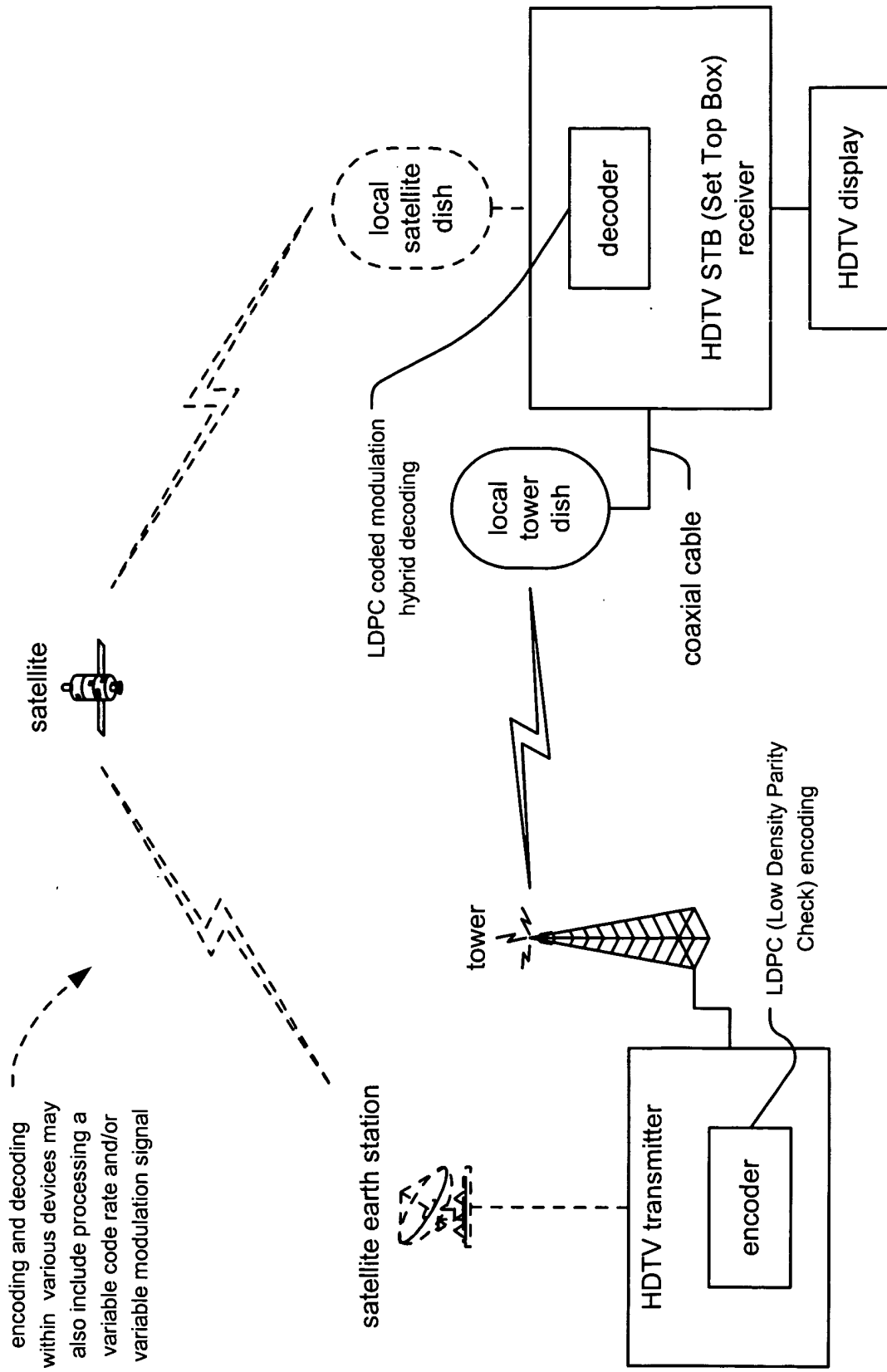


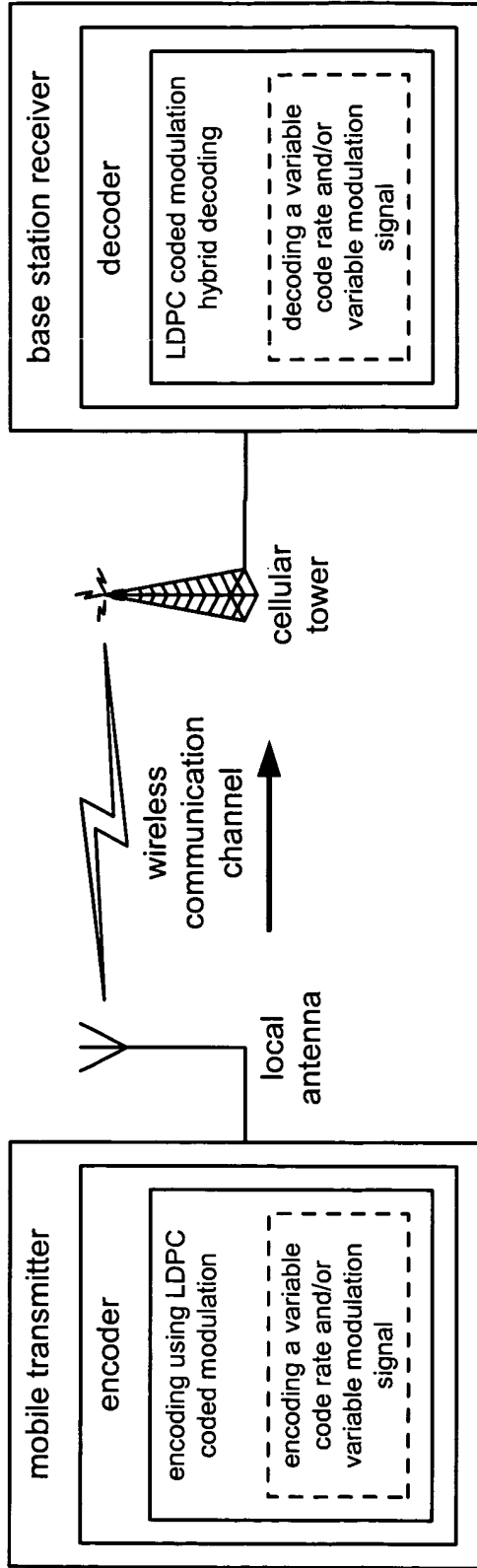
satellite communication system

Fig. 1

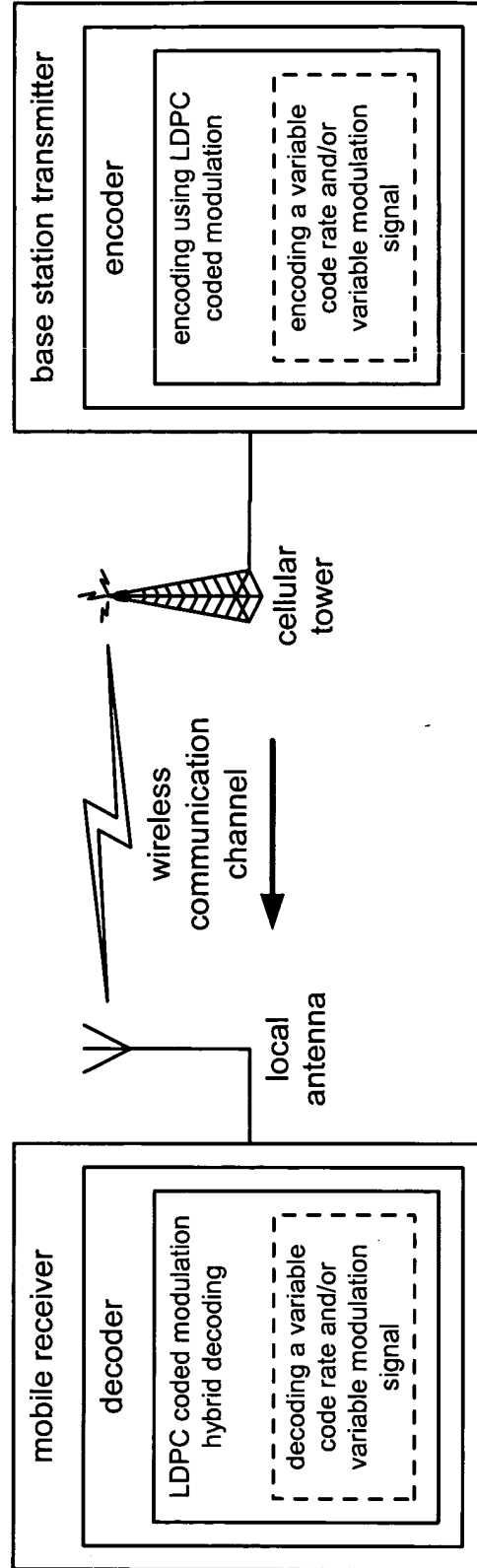


HDTV (High Definition Television) communication system

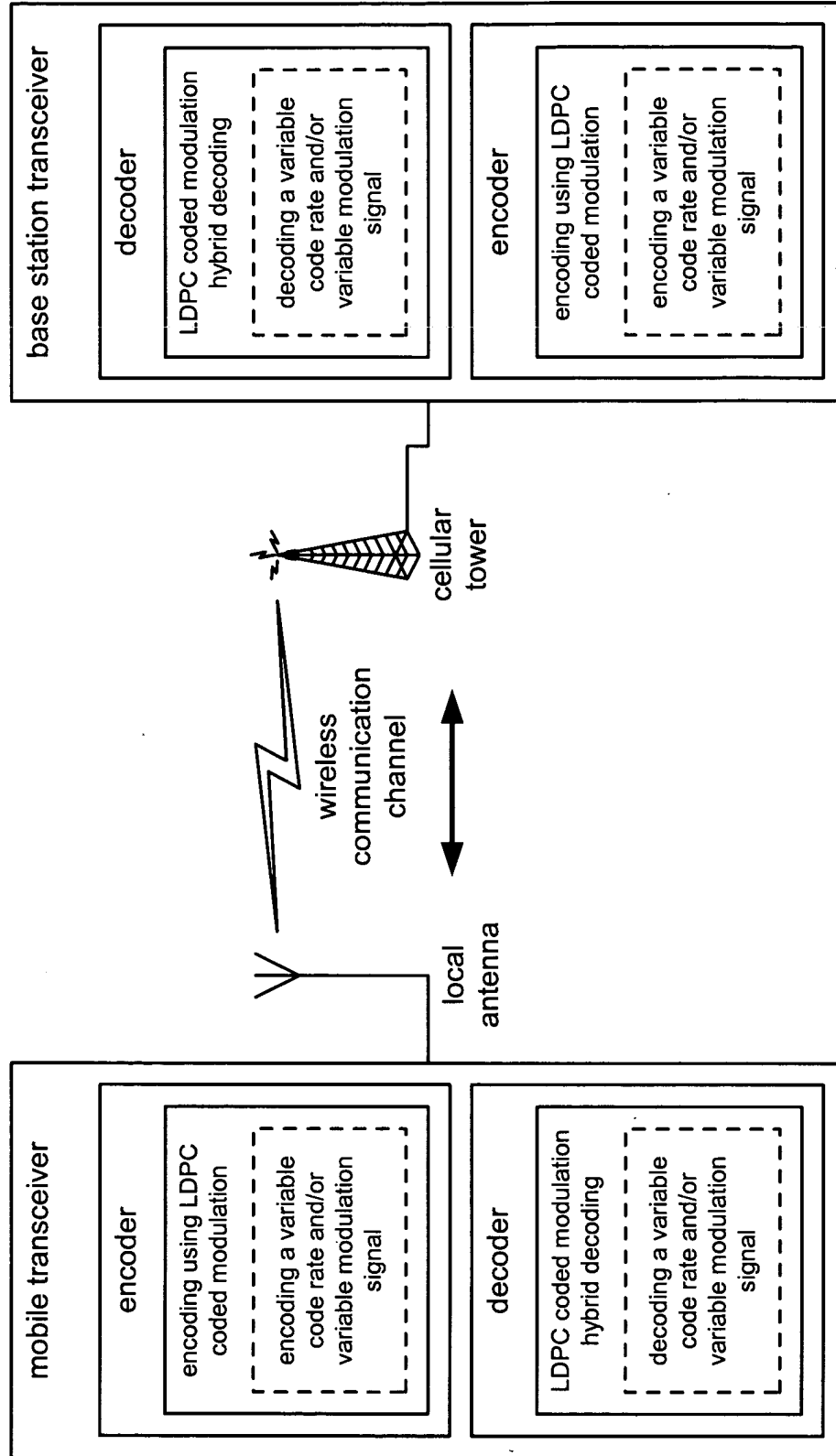
Fig. 2



uni-directional cellular communication system
Fig. 3A

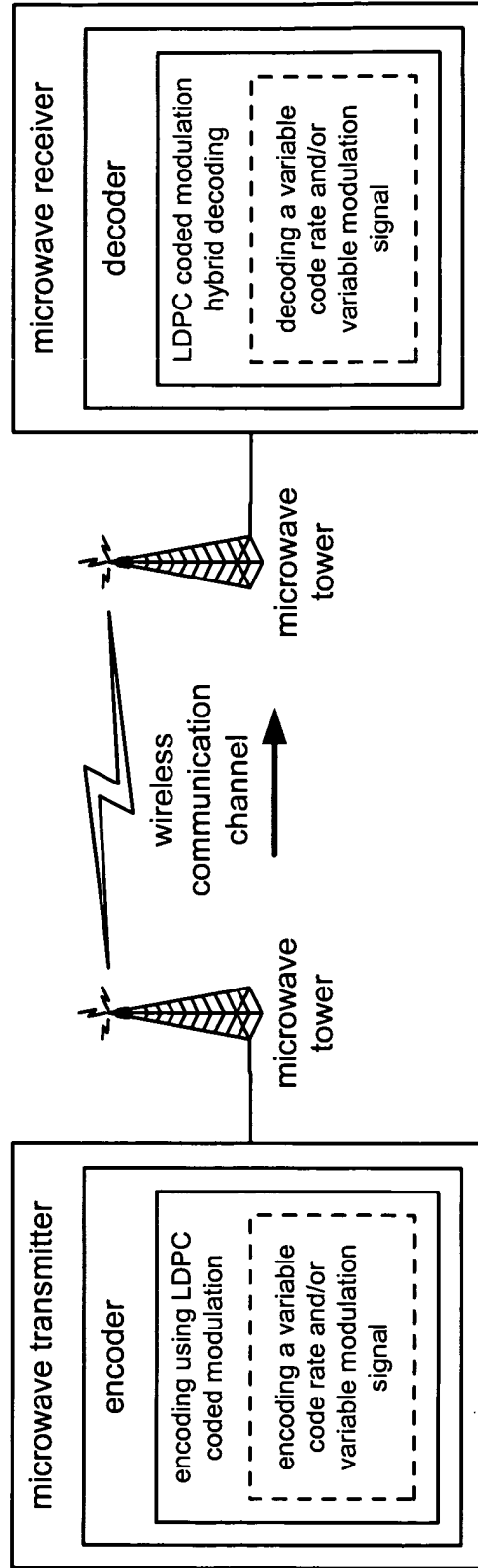


uni-directional cellular communication system
Fig. 3B

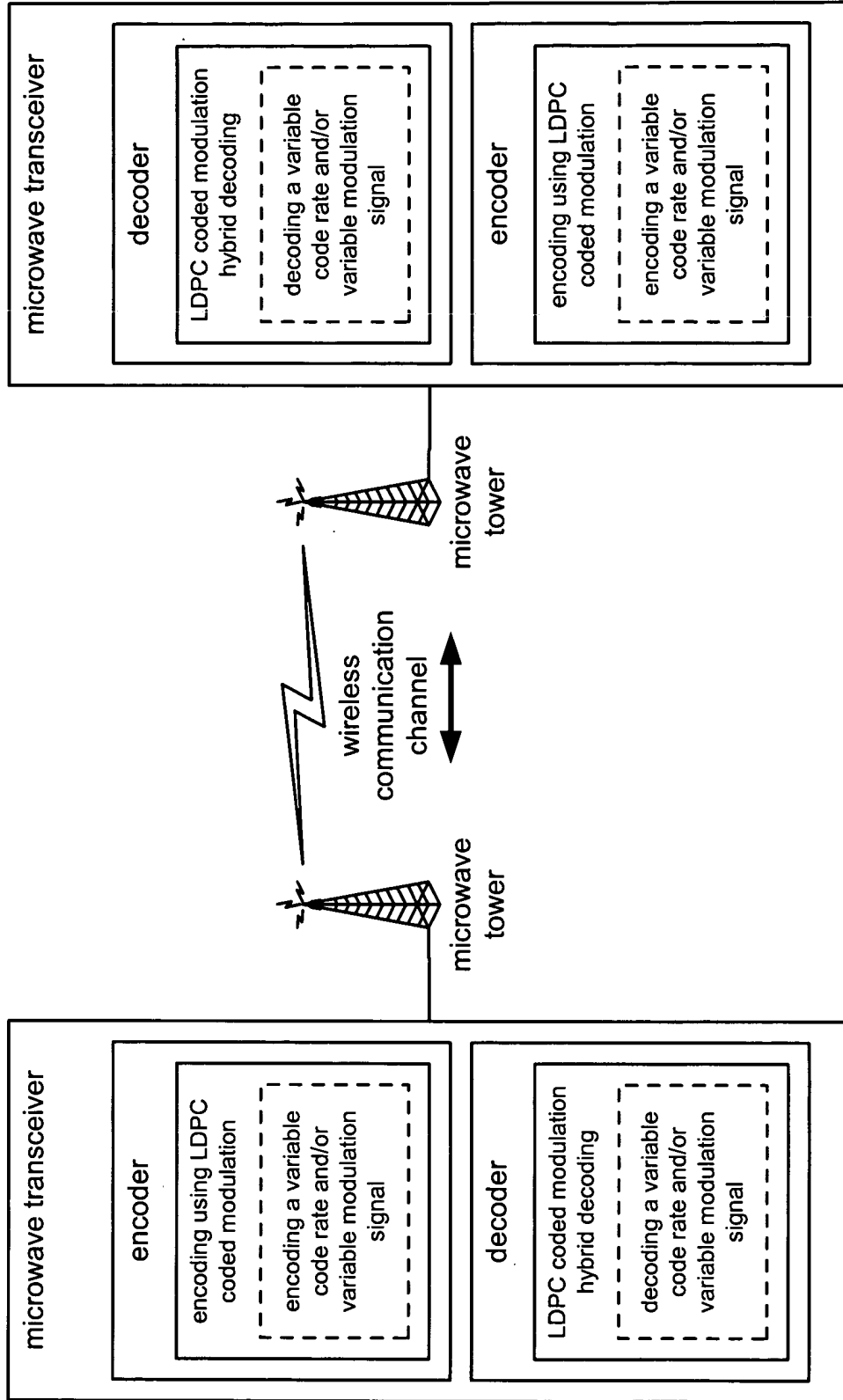


bi-directional cellular communication system

Fig. 4

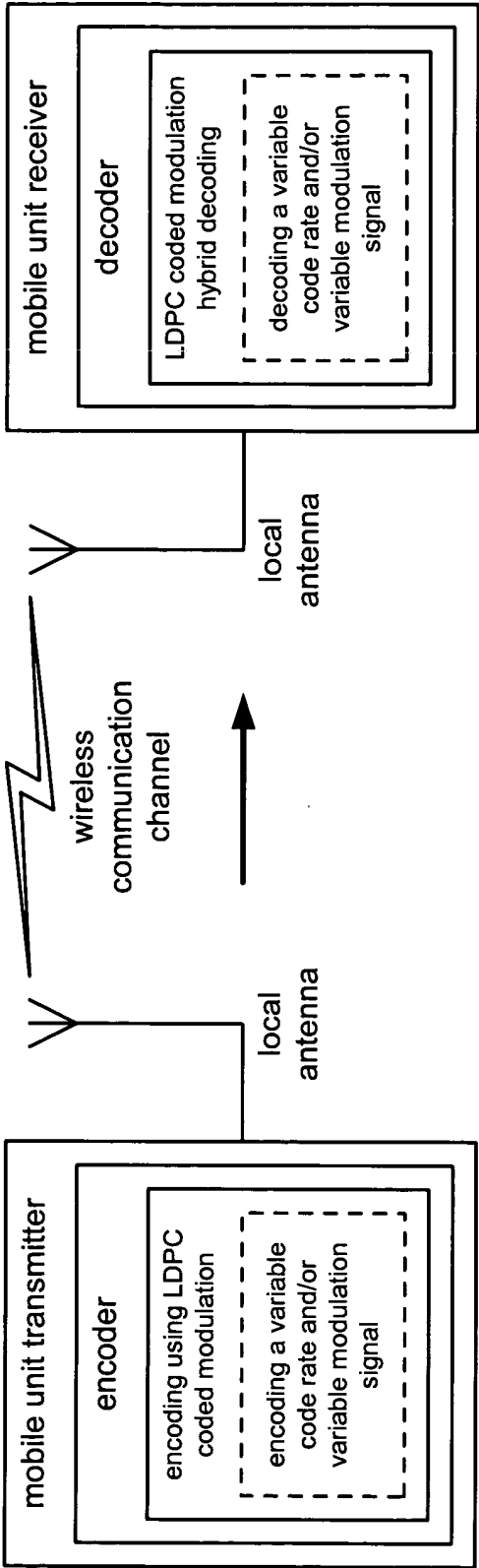


uni-directional microwave communication system
Fig. 5



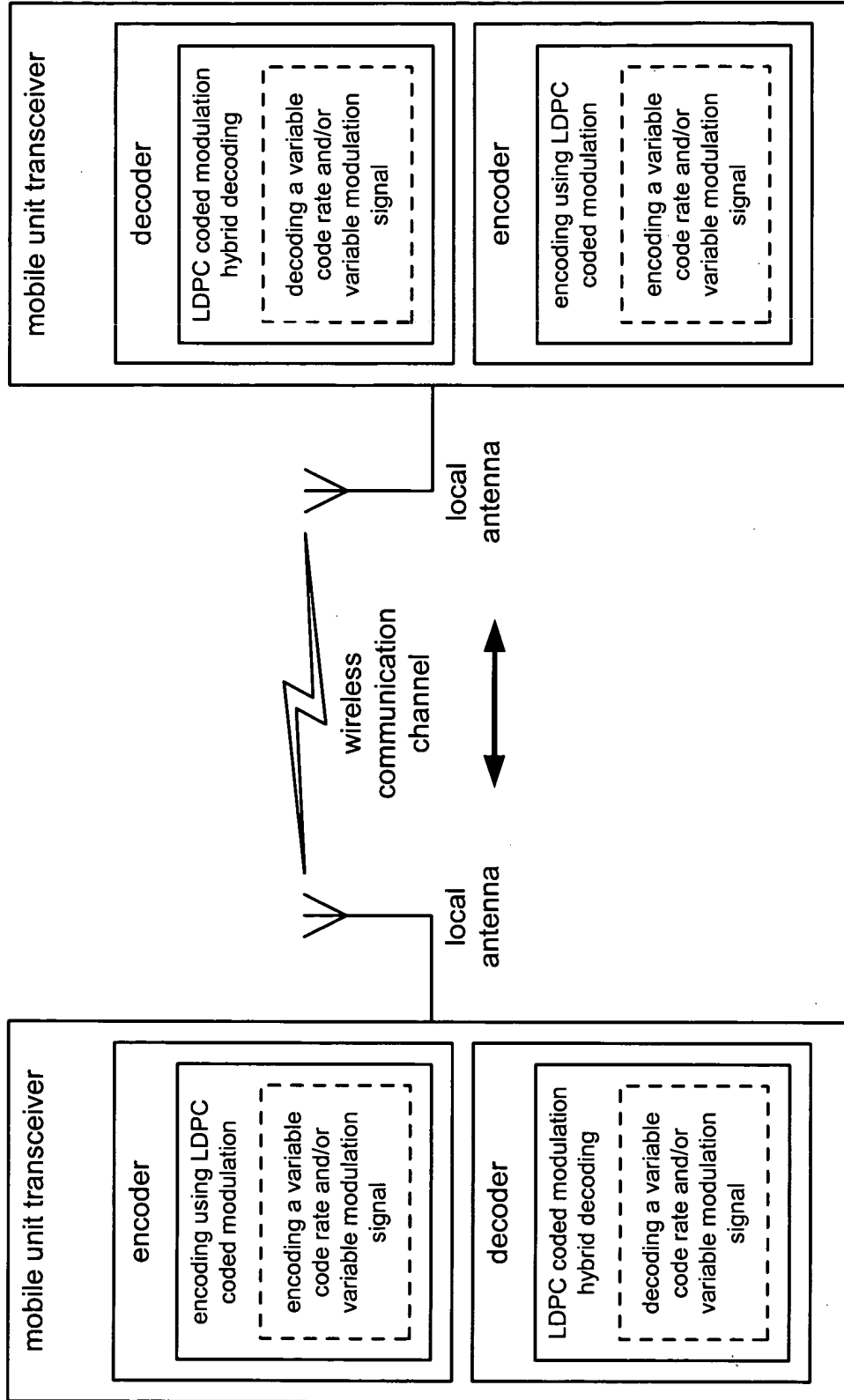
bi-directional microwave communication system

Fig. 6



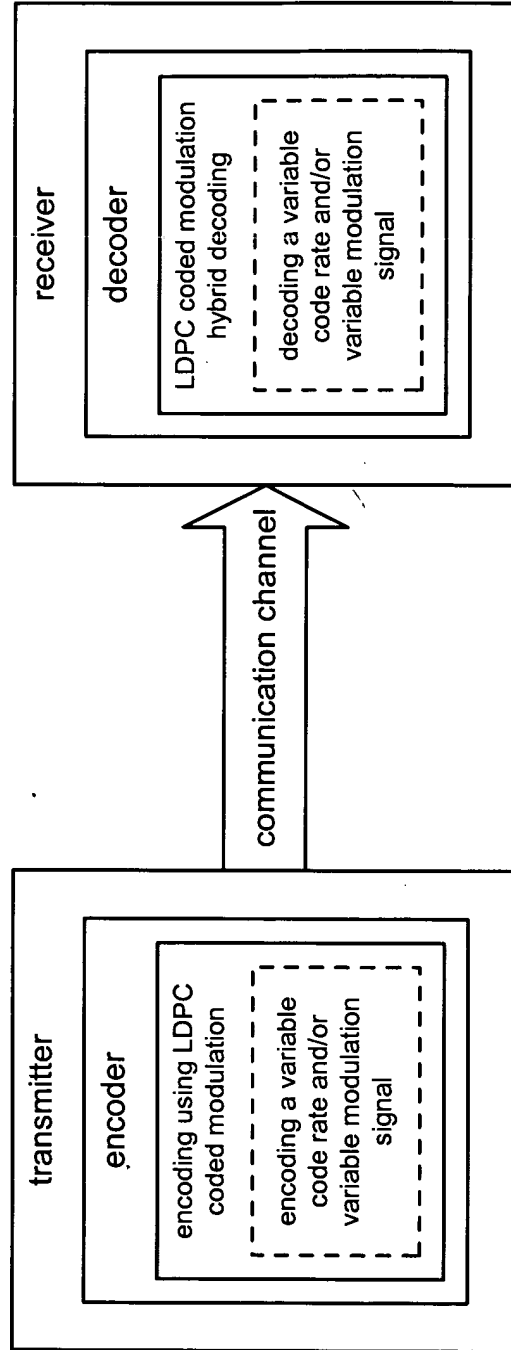
uni-directional point-to-point radio communication system

Fig. 7



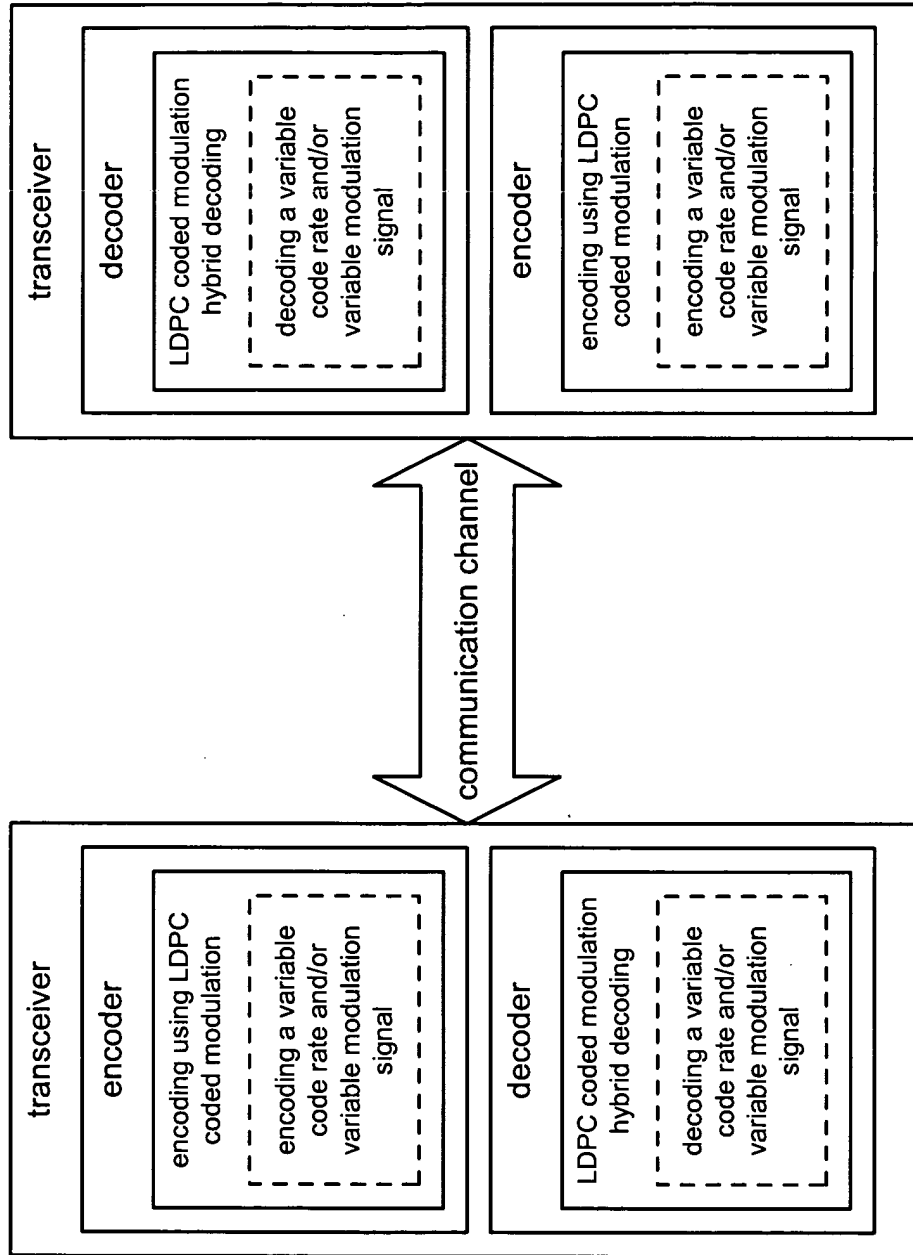
bi-directional point-to-point radio communication system

Fig. 8



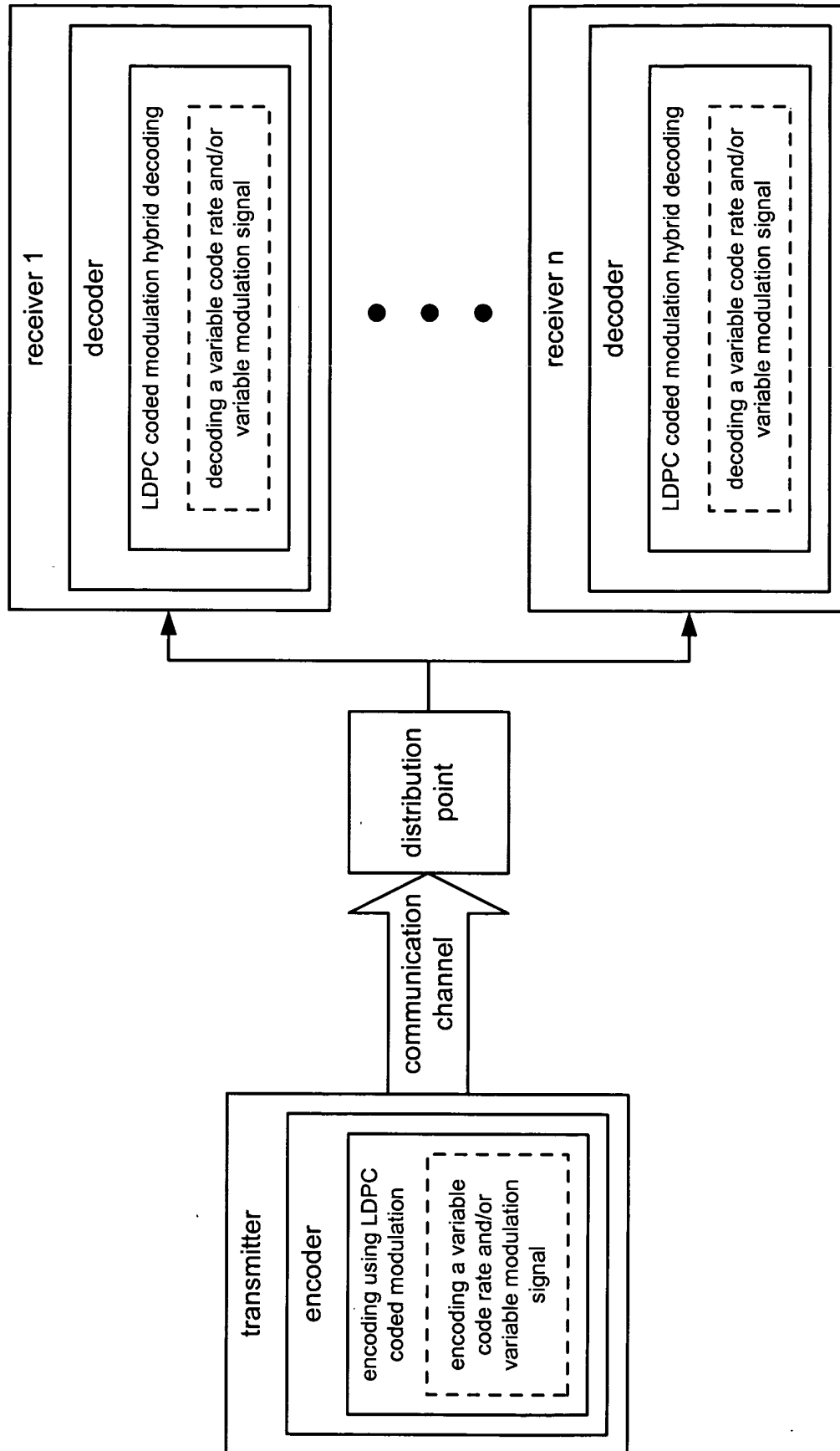
uni-directional communication system

Fig. 9



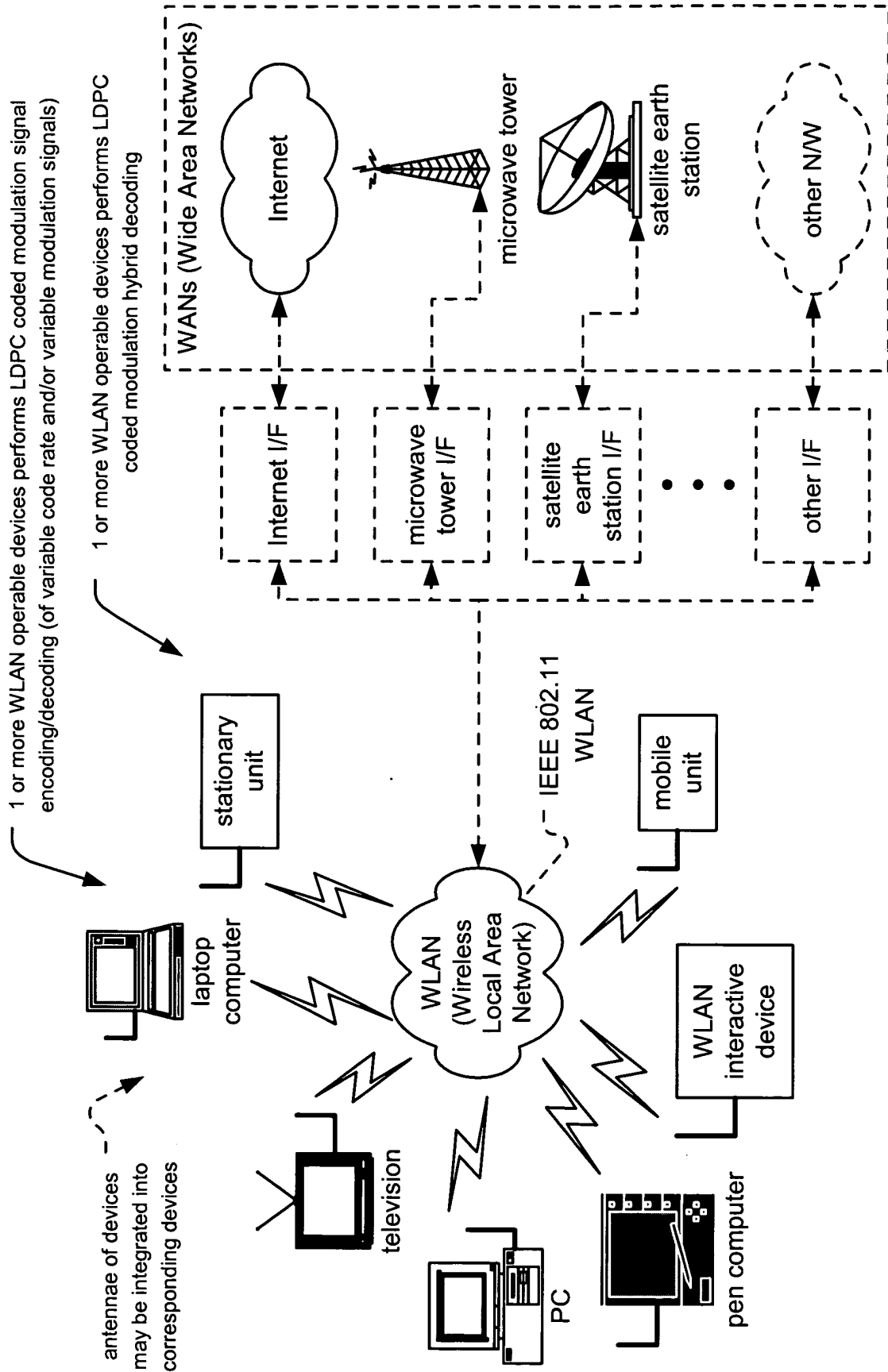
bi-directional communication system

Fig. 10



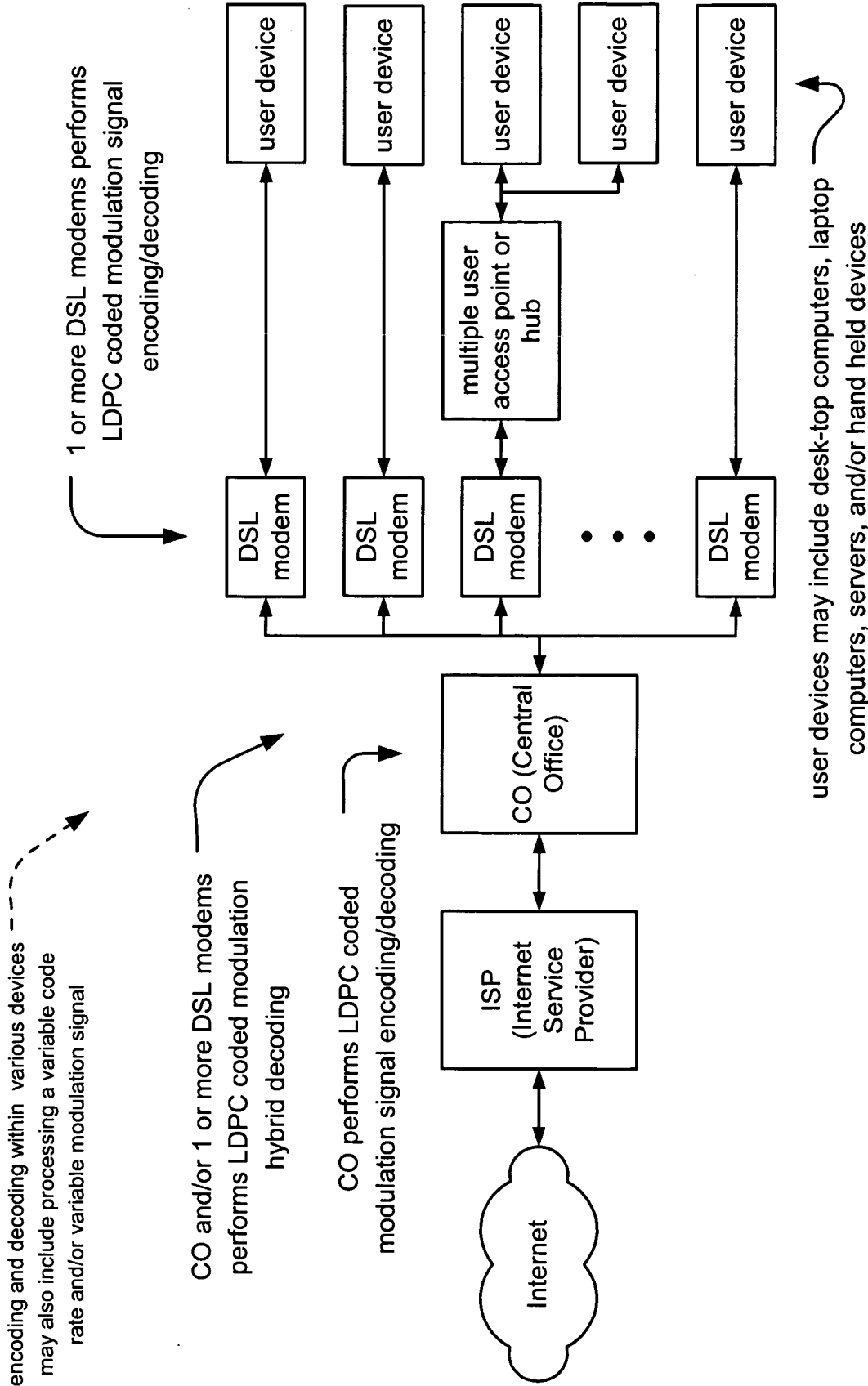
one to many communication system

Fig. 11



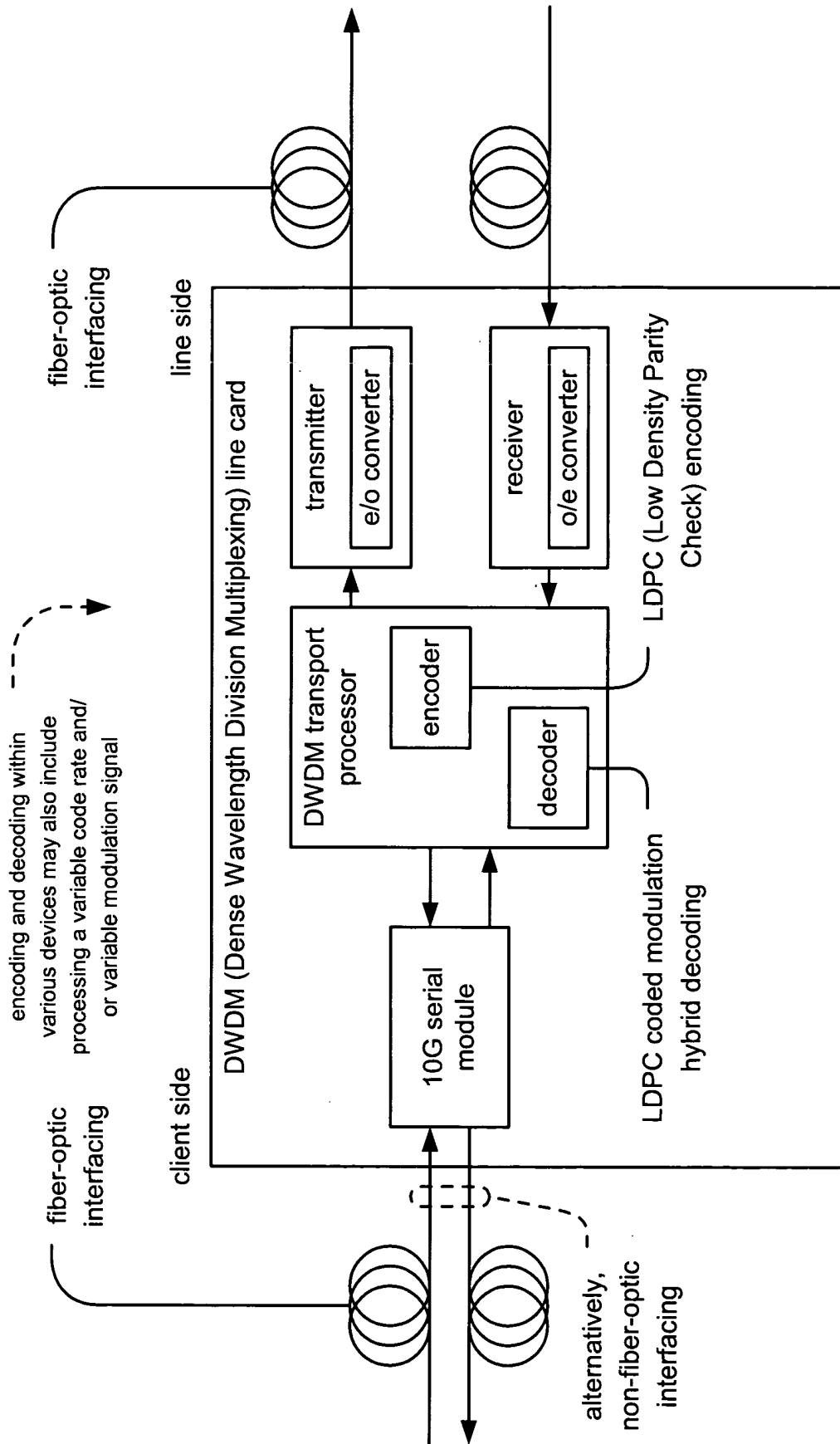
WLAN (Wireless Local Area Network) communication system

Fig. 12



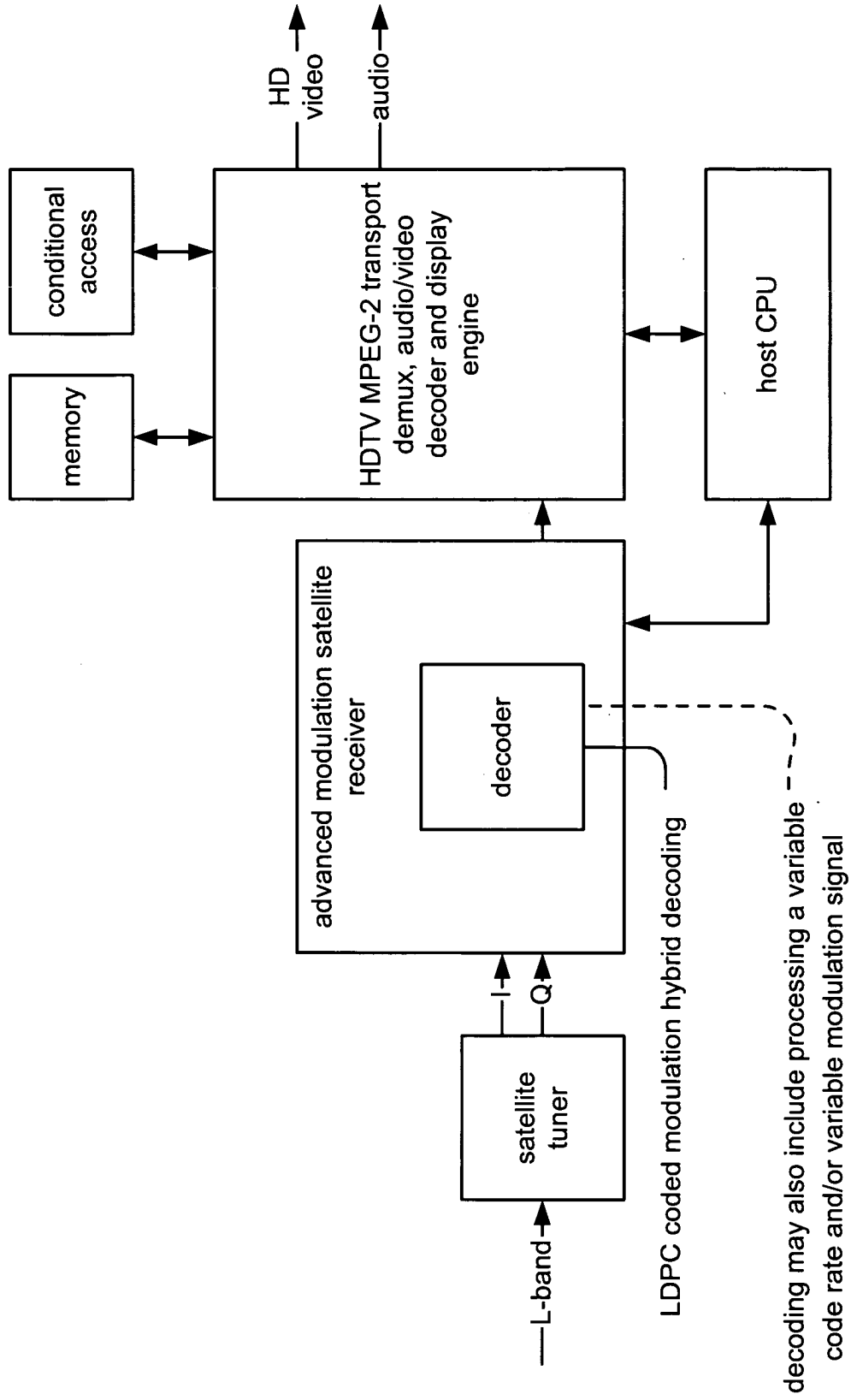
DSL (Digital Subscriber Line) communication system

Fig. 13



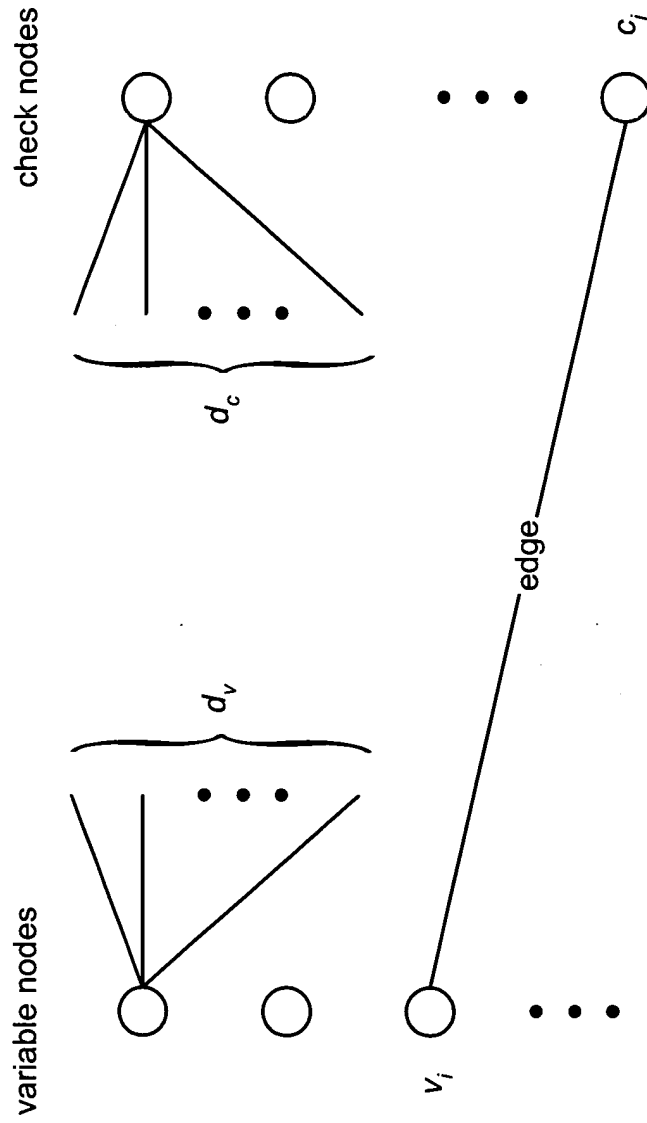
fiber-optic communication system

Fig. 14



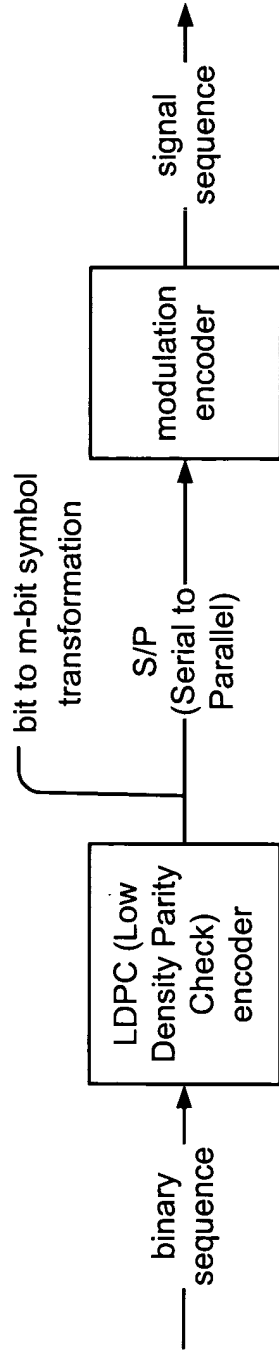
satellite receiver STB (Set Top Box) system

Fig. 15

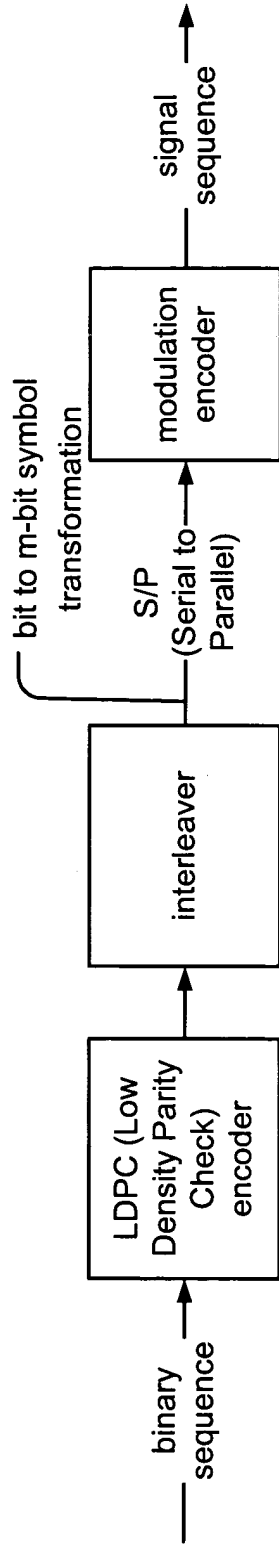


LDPC (Low Density Parity Check) code bipartite graph

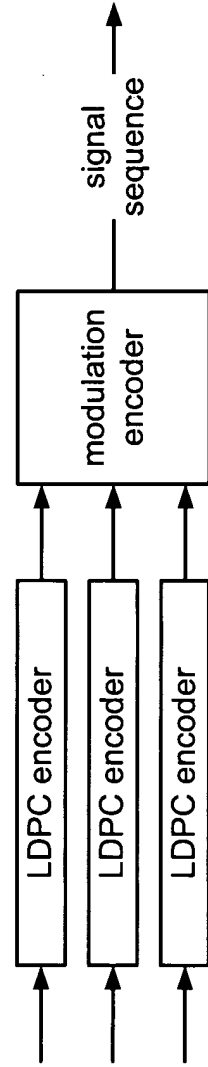
Fig. 16



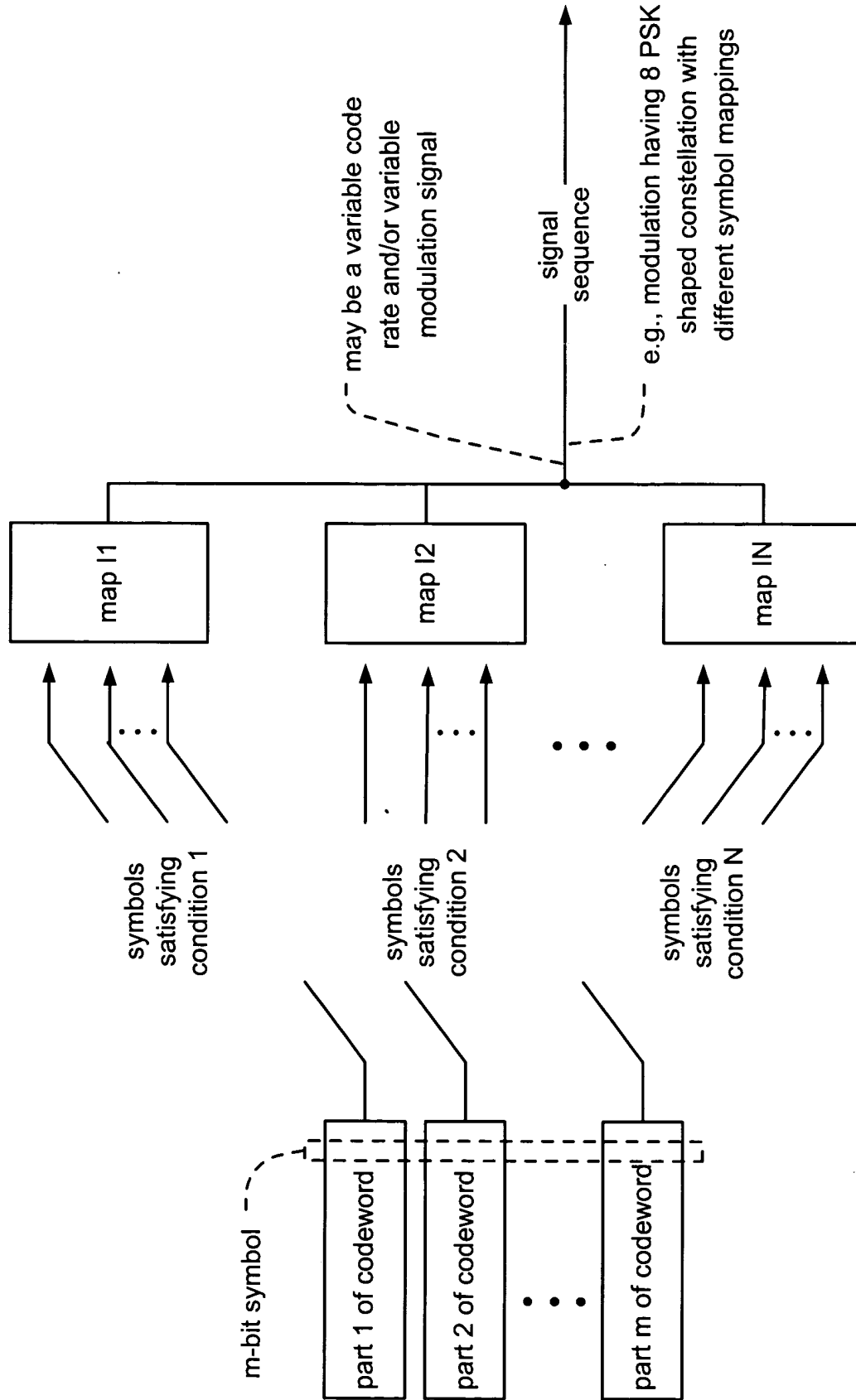
direct combining of LDPC (Low Density Parity Check) coding and modulation
Fig. 17A



BICM (Bit Interleaved Coded Modulation)
Fig. 17B

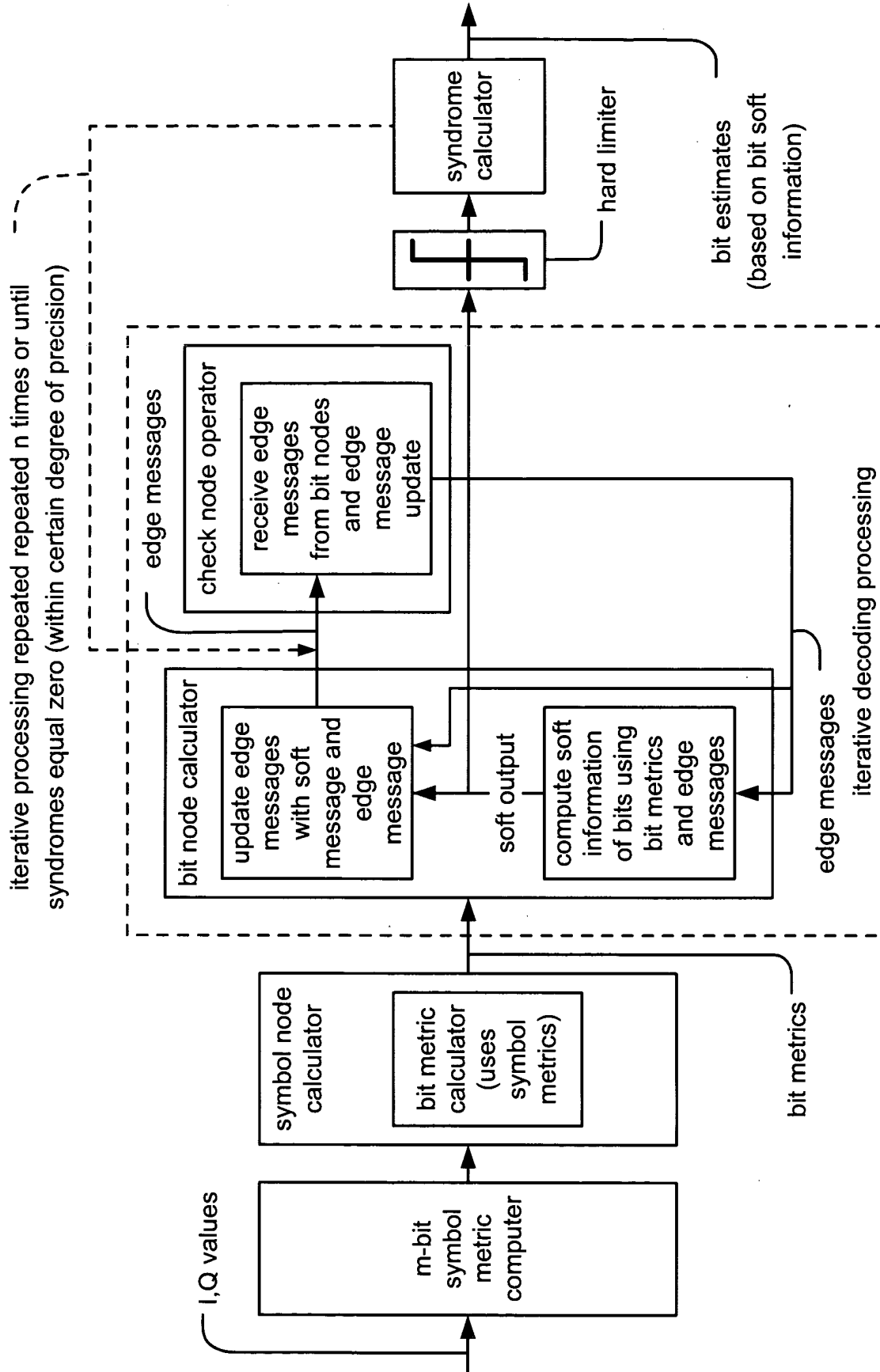


multilevel coded modulation
Fig. 17C



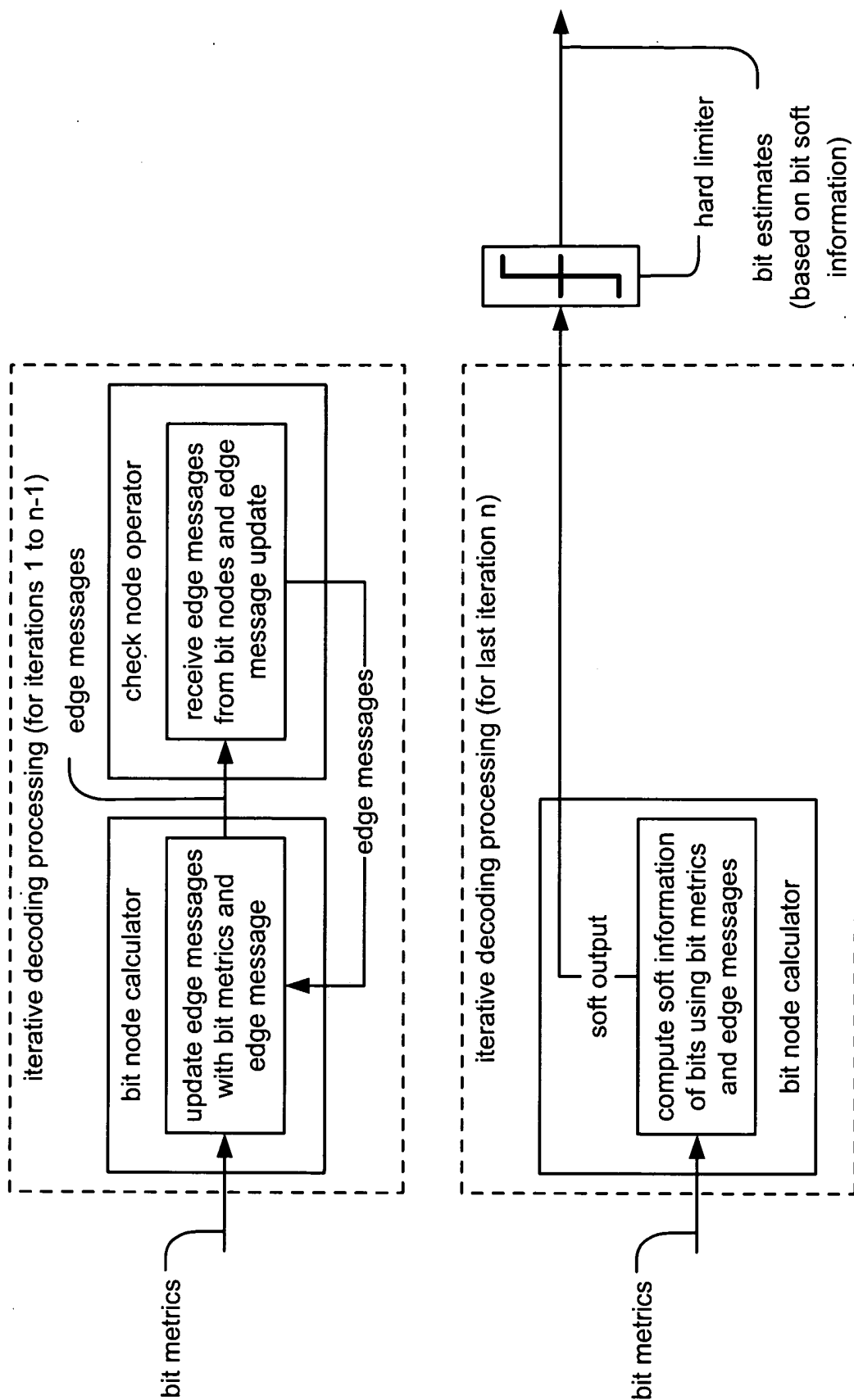
variable signal mapping LDPC (Low Density Parity Check) coded modulation system

Fig. 18



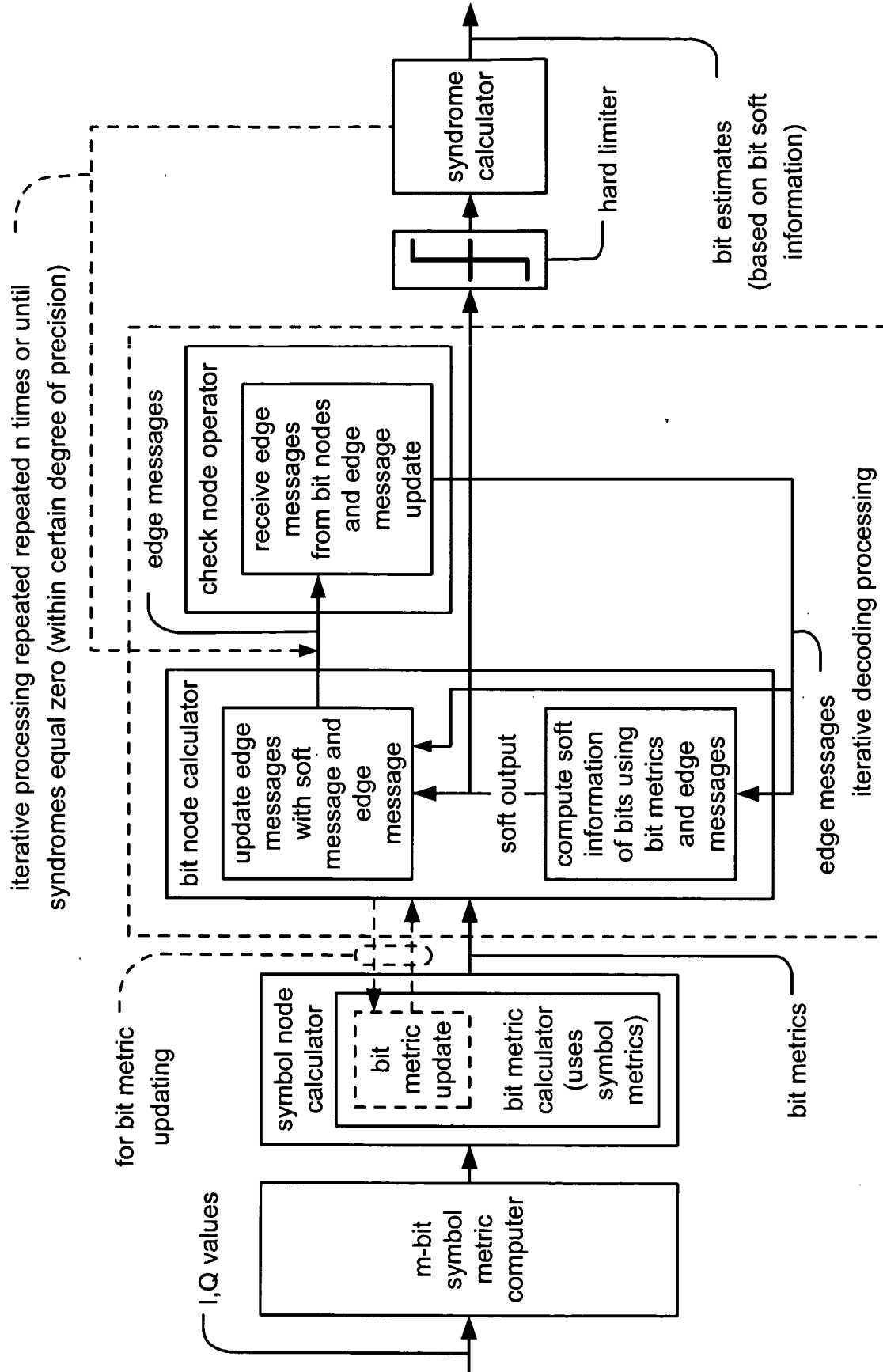
LDPC (Low Density Parity Check) coded modulation decoding functionality using bit metric

Fig. 19



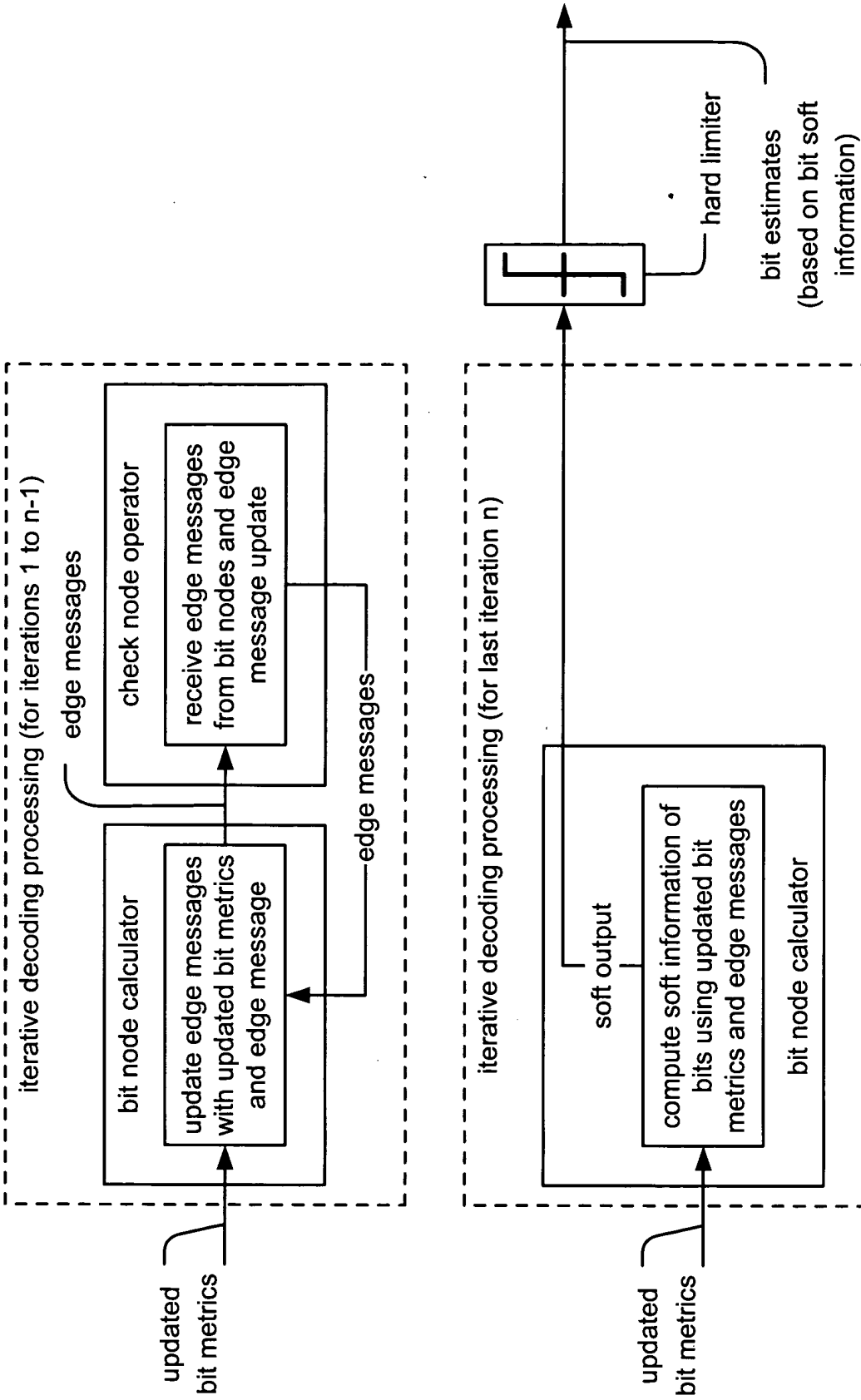
alternative LDPC coded modulation decoding functionality using bit metric (when performing n number of iterations)

Fig. 20



LDPC (Low Density Parity Check) coded modulation decoding functionality using bit metric (with bit metric updating)

Fig. 21



alternative LDPC coded modulation decoding functionality using bit metric (with bit metric updating)
(when performing n number of iterations)

Fig. 22

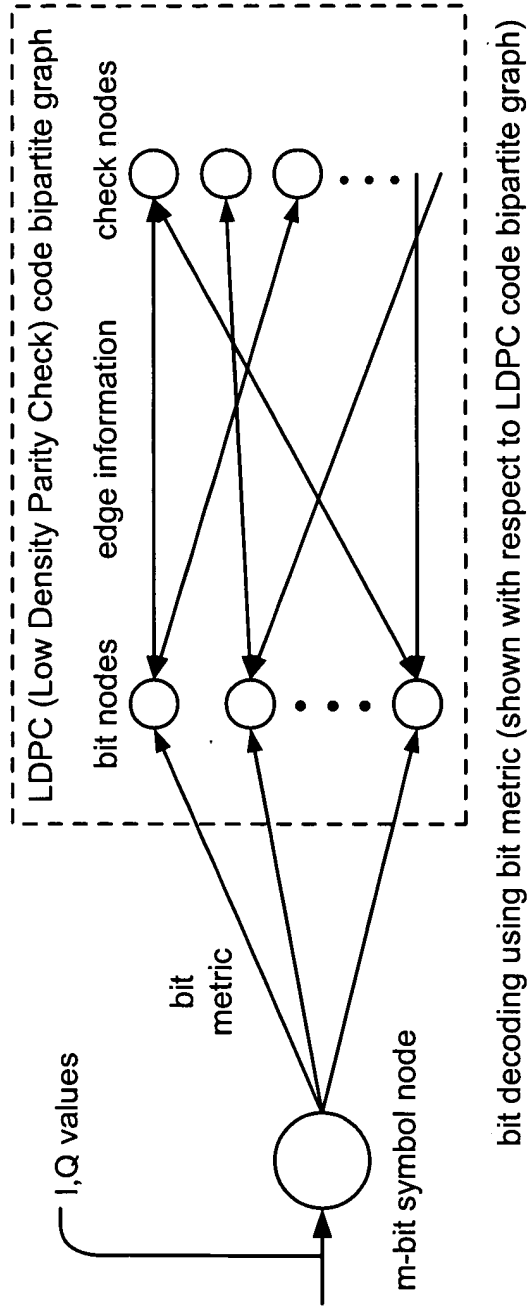


Fig. 23A

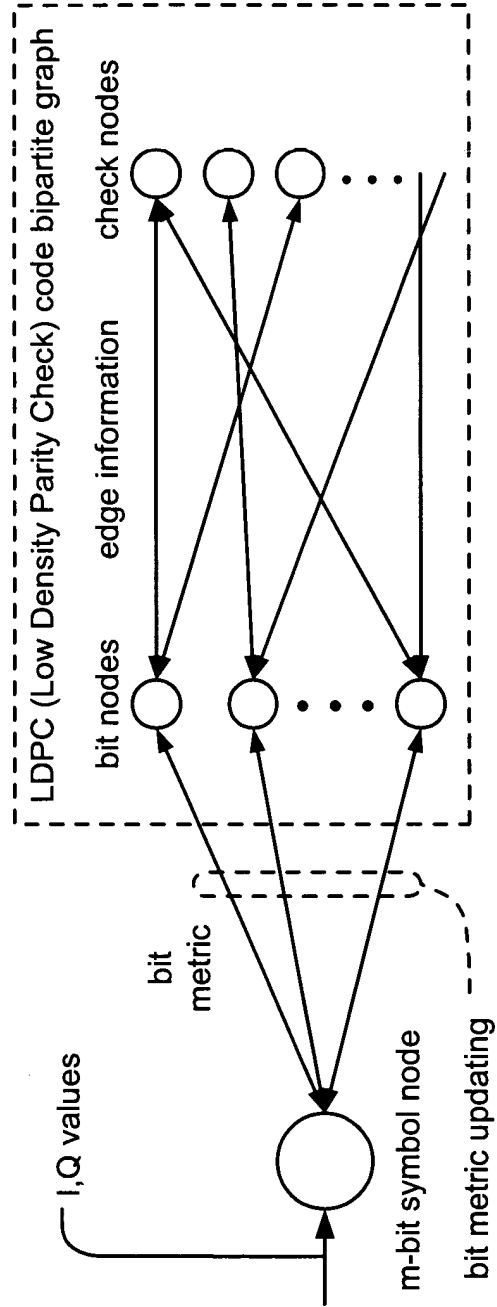


Fig. 23B

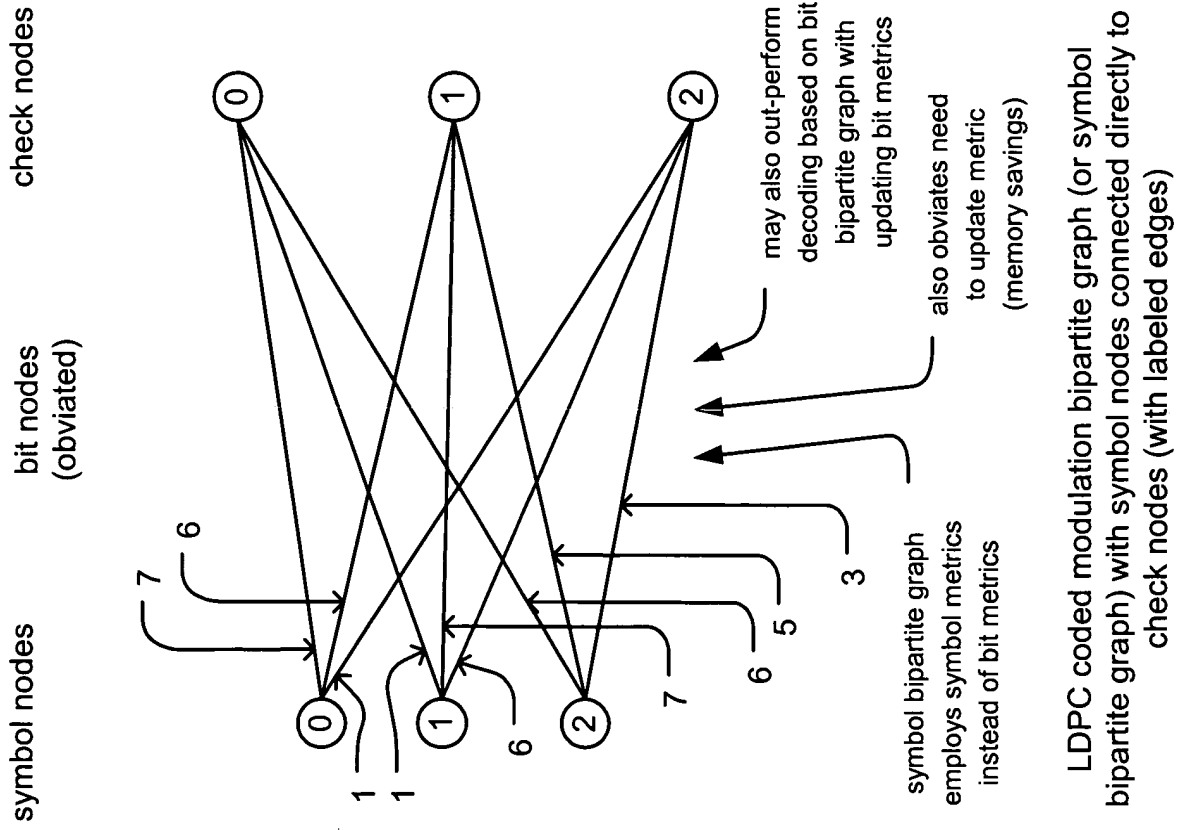


Fig. 24B

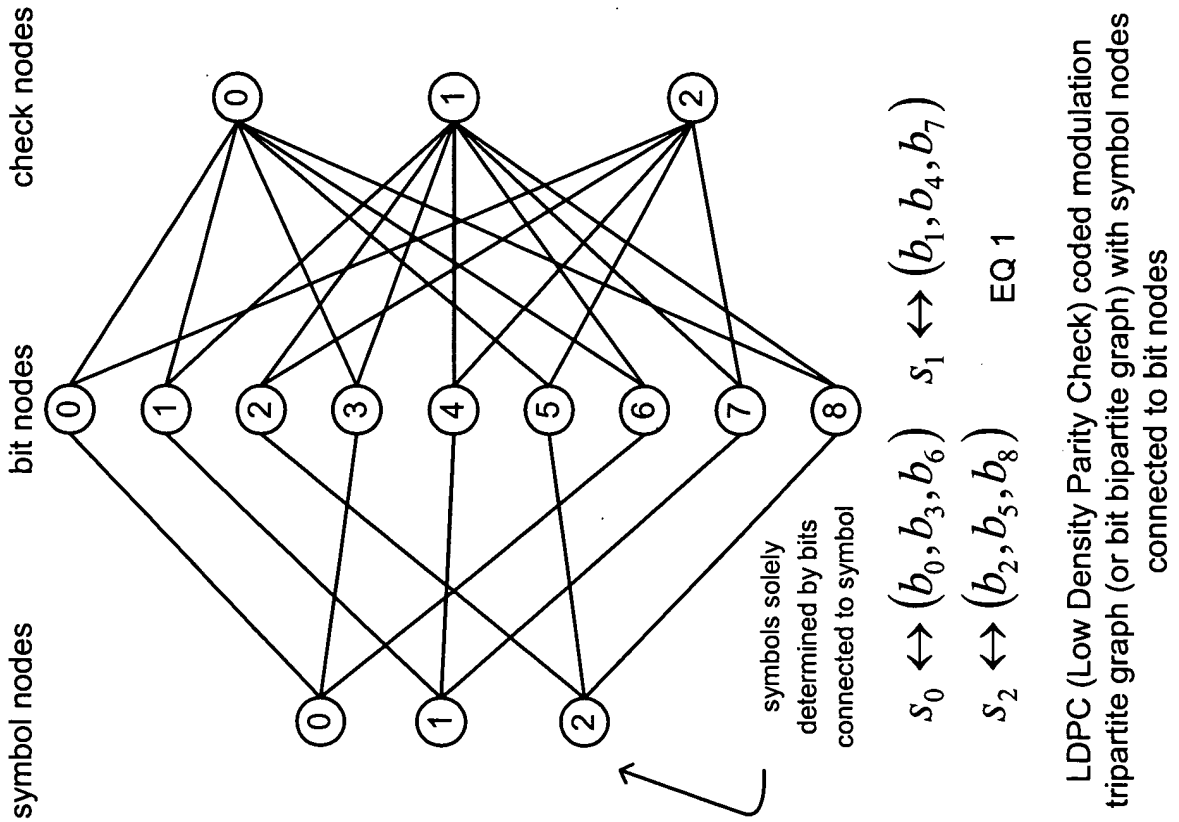
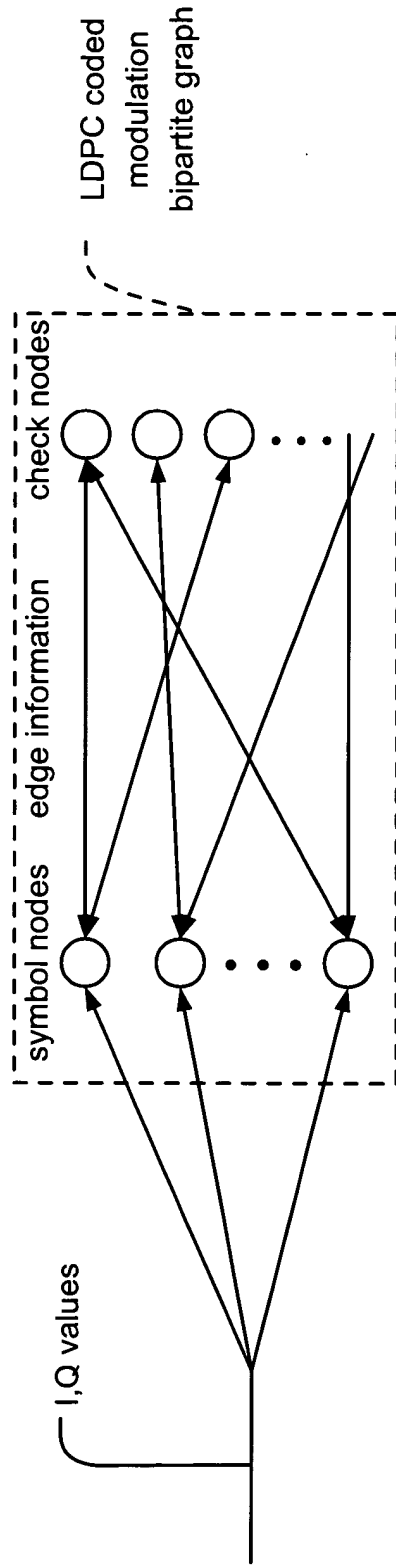


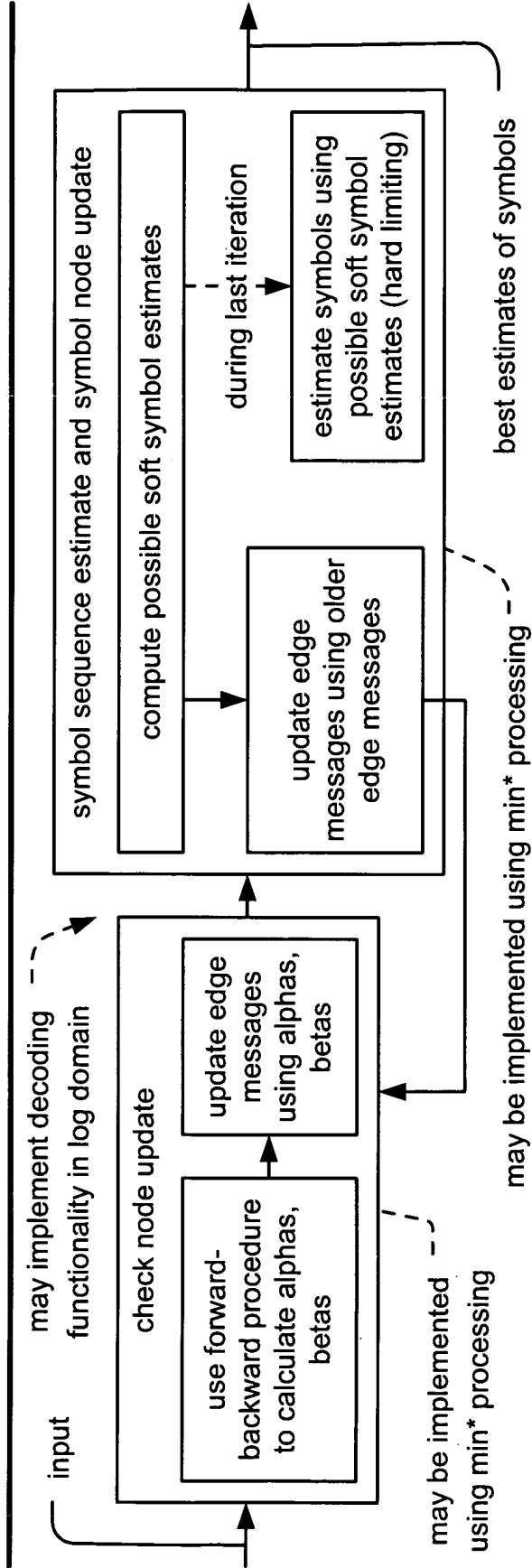
Fig. 24A

LDPC (Low Density Parity Check) coded modulation tripartite graph (or bit bipartite graph) with symbol nodes connected to bit nodes



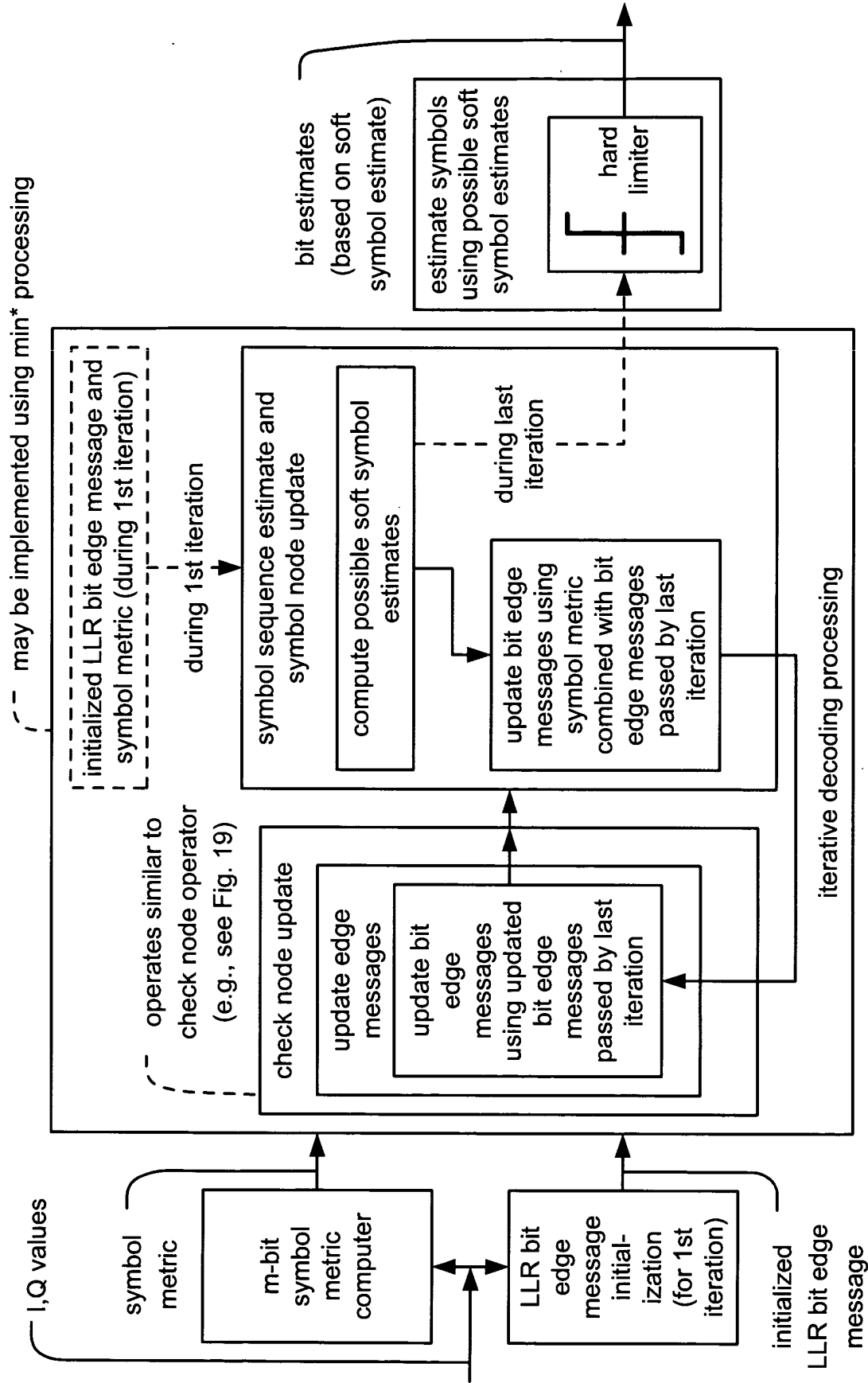
symbol decoding (shown with respect to LDPC (Low Density Parity Check) coded modulation bipartite graph)

Fig. 25A



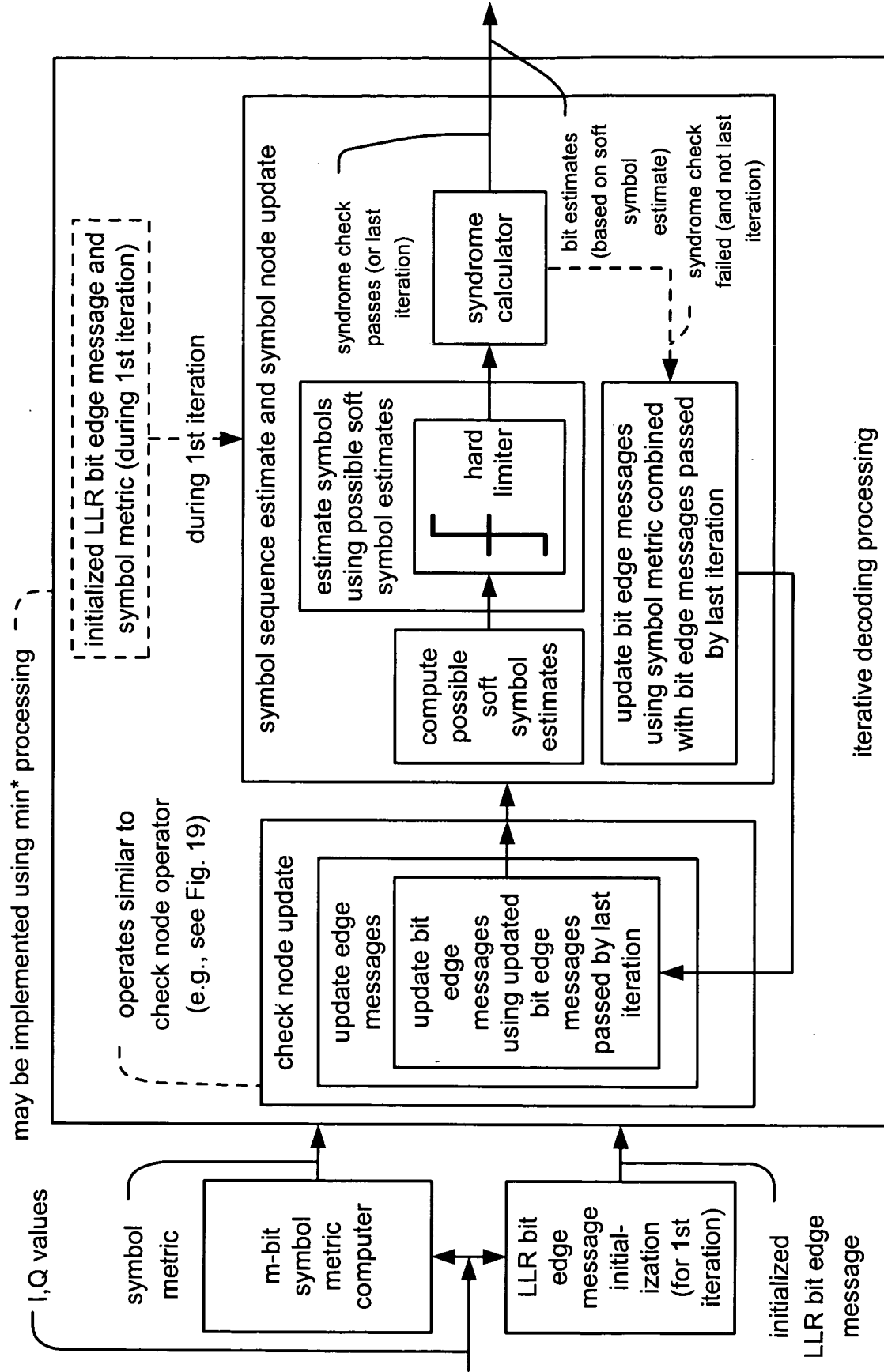
symbol decoding functionality (supported with LDPC (Low Density Parity Check) coded modulation bipartite graph)

Fig. 25B



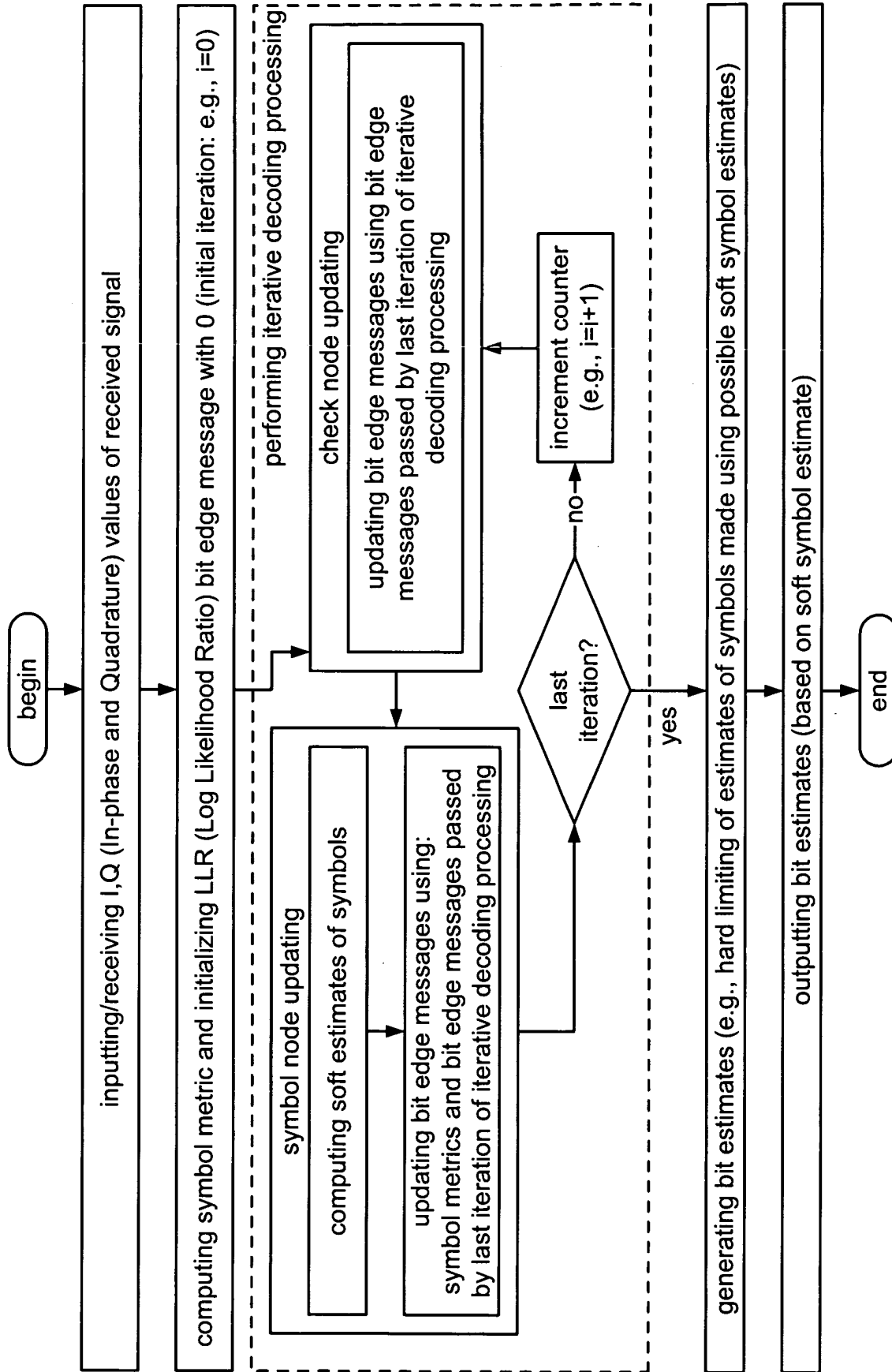
hybrid decoding functionality (having reduced complexity of symbol decoding) of LDPC coded modulation signals

Fig. 26



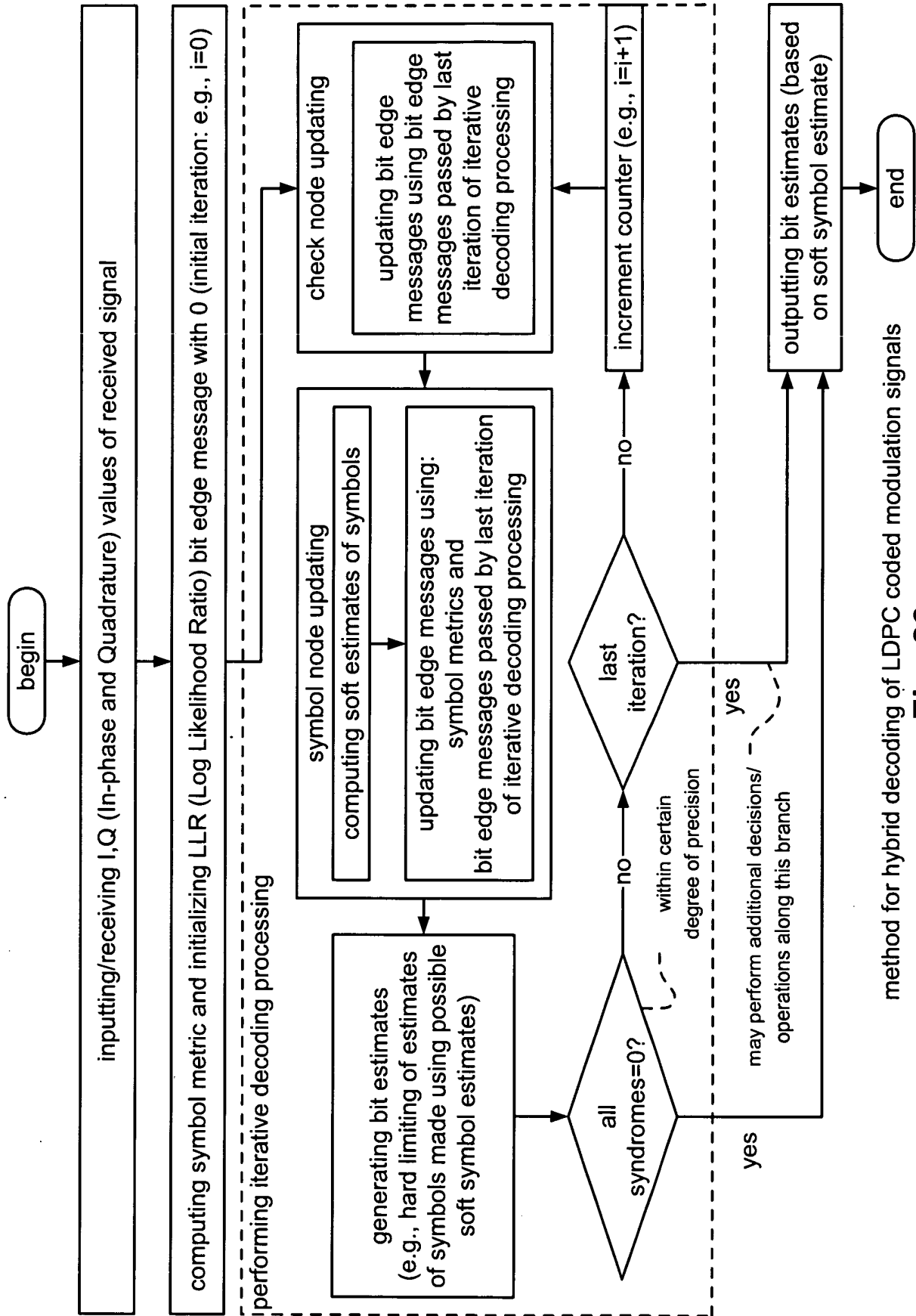
hybrid decoding functionality (having reduced complexity of symbol decoding) of LDPC coded modulation signals

Fig. 27



method for hybrid decoding of LDPC coded modulation signals

Fig. 28



method for hybrid decoding of LDPC coded modulation signals

Fig. 29

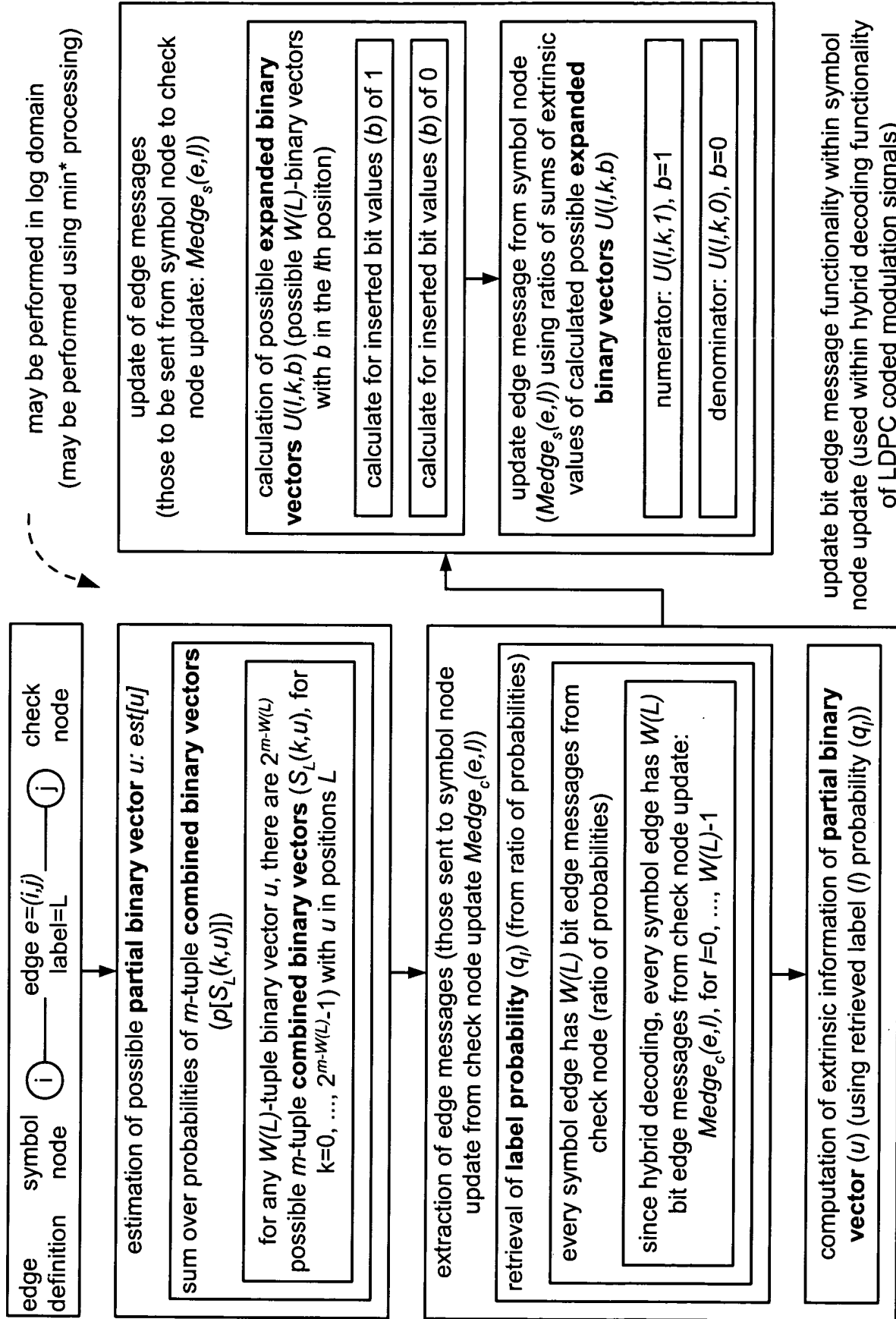
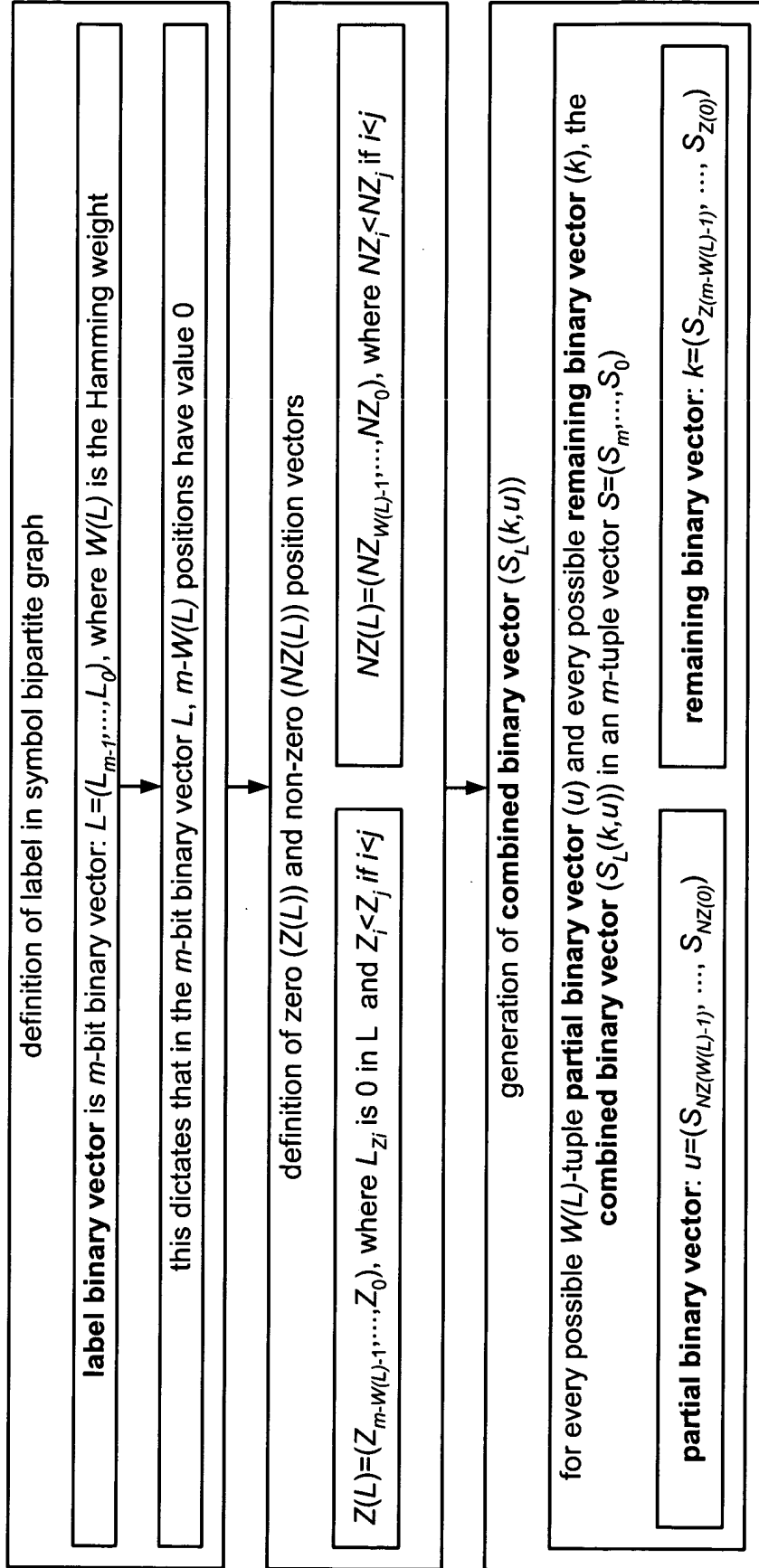
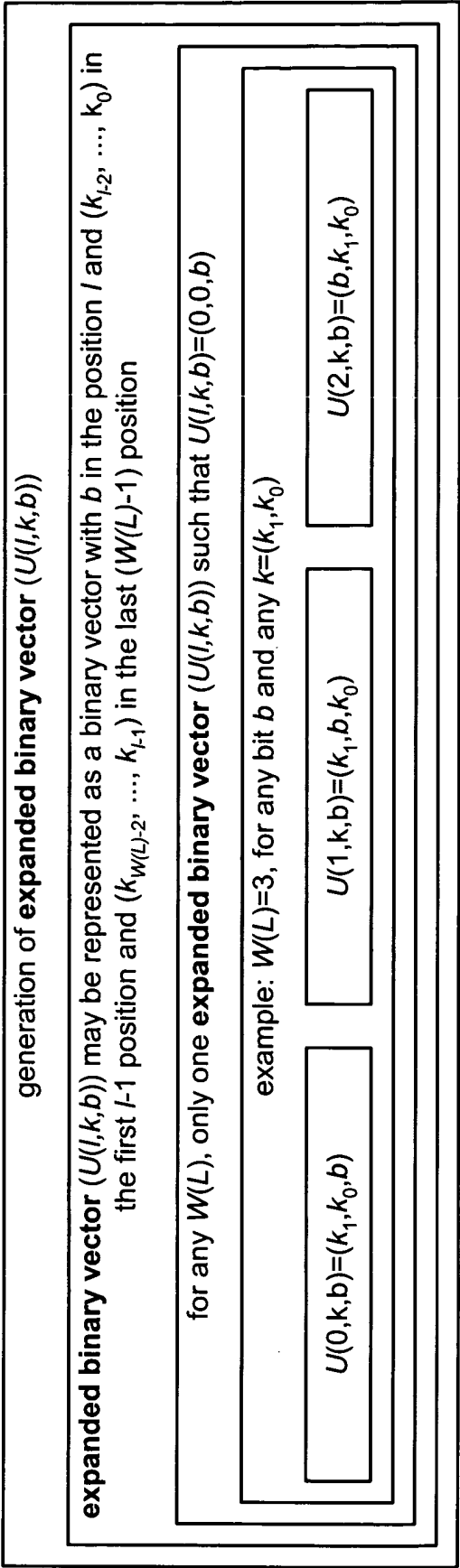


Fig. 30



combined binary vector generation

Fig. 31



expanded binary vector generation

Fig. 32

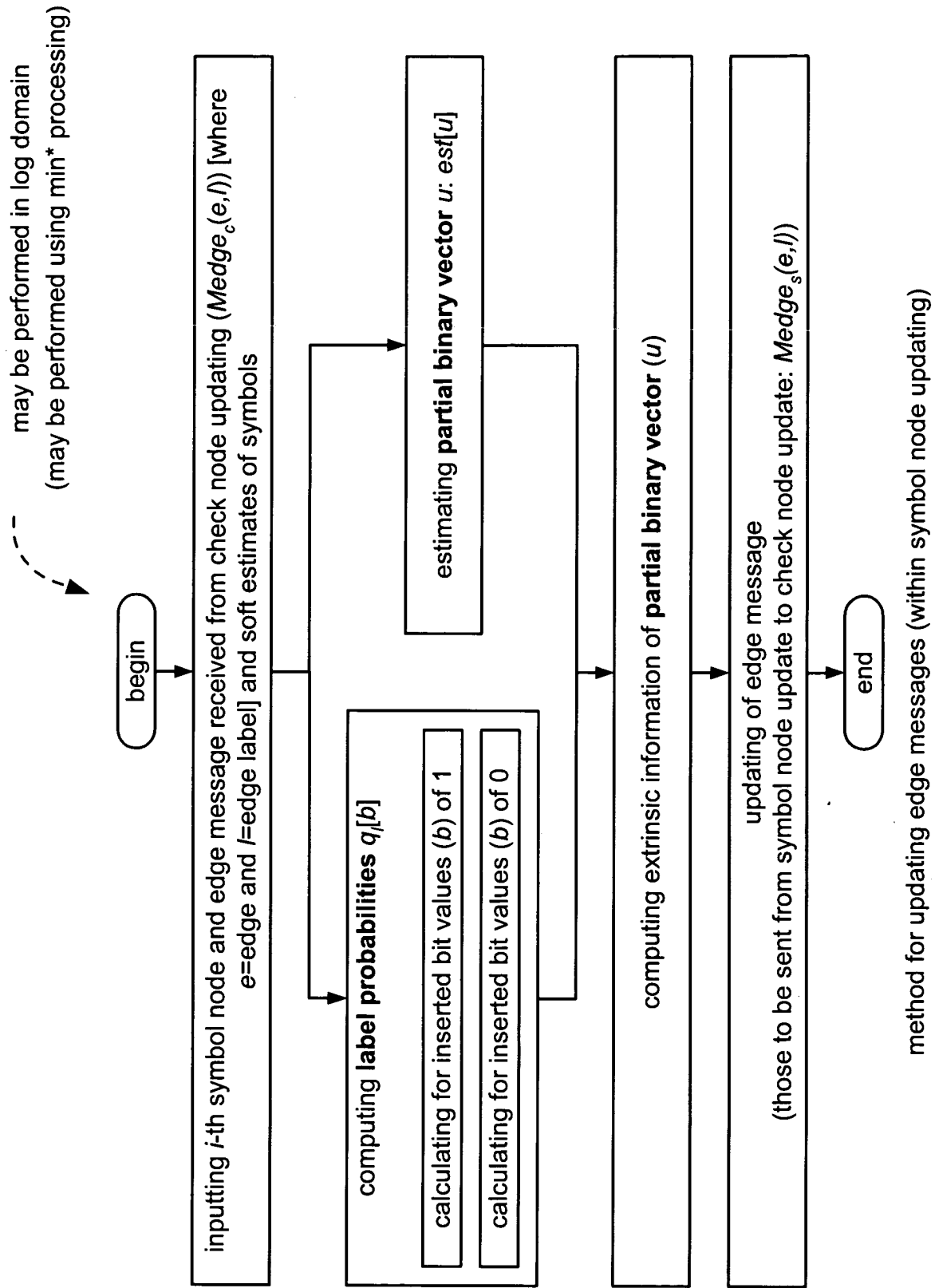
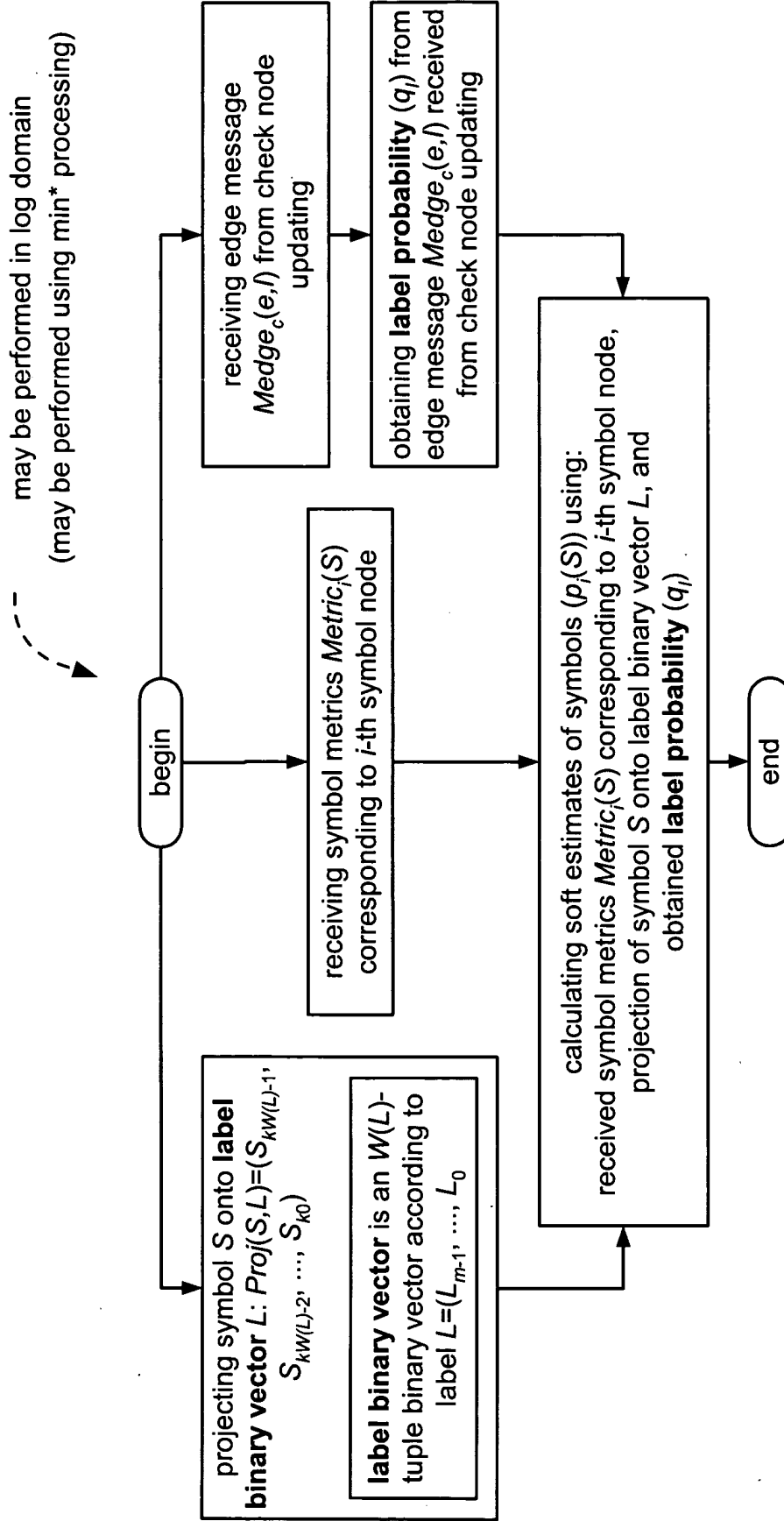
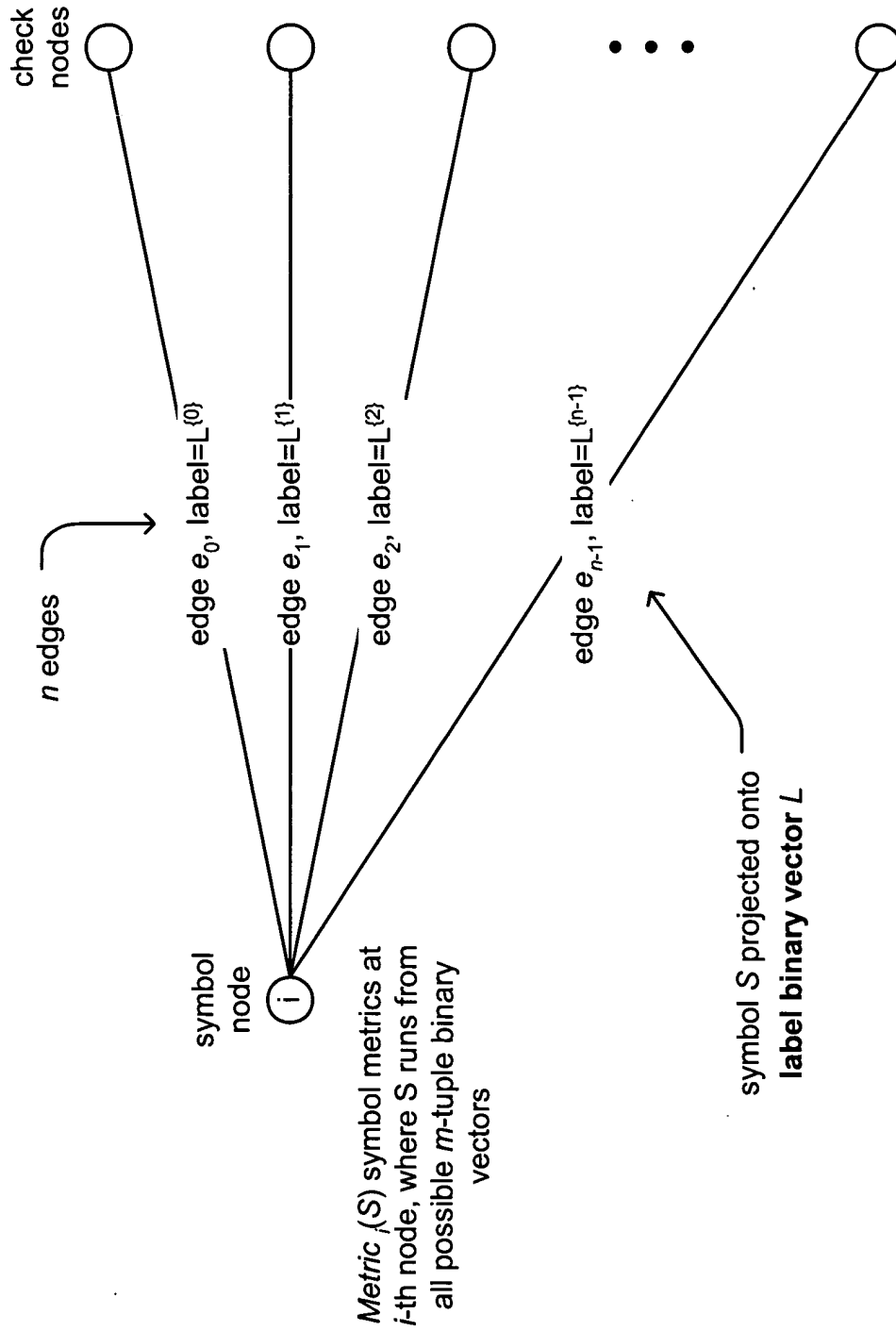


Fig. 33



method for calculating soft estimates of symbols (within symbol node updating)

Fig. 34



projection of symbol onto label binary vector

Fig. 35

